

CAT 7, Leo Tanaka: **Citation:** Guy GP, Watson M, et al. *Indoor Tanning-Related Injuries Treated in a National Sample of US Hospital Emergency Departments*. JAMA Internal Medicine. Online First, Dec 15, 2014; doi:10.1001/jamainternmed.2014.6697.

BLUF: Be sure to code your E-codes so researchers can make sub-par studies and get published, like this one telling us that tanning-related injuries are on the decline.

Clinical Question: What is the incidence of tanning-related injuries seen in US emergency rooms?

Background: Tanning injuries are unfortunately too common due to an industry catering to aesthetic desires of the general population. They invoke UV radiation while pigmenting the skin, which can lead to an increase in cancer cases. Tanning devices have traditionally required timers by the FDA to prevent overexposure; however, compliance has been an issue. This study notes a study from 2003 in the Journal of American Academic Dermatology which stated only 5% of tanning salons in North Carolina prescribed to this regulation. In 2014, the FDA reclassified tanning beds further regulating the industry.

Methods: A retrospective analysis of injury data accumulated by the US Consumer Product Safety Commission was made from 2003 to 2012. The National Electronic Injury Surveillance System-All Injury Program collects data on non-fatal injury-related emergency encounters from 66 NEISS-identified hospitals each year, totaling roughly 500,000 cases each year. Coders then extract data including demographics, then place a narrative to describe the encounter; all cases are de-identified during data gathering to render free from HIPPA and IRB purview.

Possible cases were identified using relevant key words, then reviewed by 3 separate study researchers and further evaluated to ensure they met the case definition of a tanning-related injury. The injuries were then broken into 5 groups, including burns; eye injuries; musculoskeletal injuries; syncope; and other. These cases were then weighted to give an estimate of national incidence. Trends through the years were analyzed using negative binomial regression.

Results/Conclusions: 405 nonfatal indoor tanning-related emergency room visits were identified. This translated to an estimate of 3234 injuries per year. 82% were cases in women, 78% in non-Hispanic whites, 36% in ages 18 to 24, and 64% were in public settings. 80% of the injuries were skin burns, 10% were episodes of syncope, and 6% were eye injuries. Overall, cases have been declining each year.

Discussion: Similar to fake&bakes, this study is garbage. There is no mention of where these 66 NEISS hospitals are located thus impossible to determine whether their “weighted” estimates are an underestimate versus an over inflation of the actual data. Surely, the geographic location of the emergency room has bearing on the number of tanning-related injuries that will be seen. From my own research, there is a study performed by San Diego State University which lists the top five cities for tanning salon to resident ratio as Charleston, WV; Pittsburgh, PA; Akron, OH; Portland, ME; and Columbia, SC. Who would have thought?

Now speaking of NEISS, you can actually query the site and come up with your own data on any non-fatal injury out there. This is definitely fodder for future review and is de-identified, thus not needing IRB approval. To pillage a non-medical source to make medical observations seems funny, and in the end, doesn't make for great data; but if you were an ER resident and needed something published, this might be a great source! All joking aside, the data is specifically meant for businesses and consumers to track the safety profile of products. This is the same database that was used to determine the bouncy-castle dangers back in 2009. To their credit, the authors of that memorandum identified an estimate of 5000 cases per year of “inflatable amusements” death or injury but noted a high variance in the data for that estimated number; they then further identified that there were clustering of cases due to one NEISS hospital being next to a bouncy castle amusement park and another being next to a fairground. That level of analysis is missing from this tanning study.

Another question I have is that over a period of 9 years, 66 hospitals only saw 405 cases? This number seems low to me because I've seen at least one or two cases during residency. Are we as providers coding right? E-codes are important! Now many cases may not be deemed worthy of emergency evaluation, thus most may instead be evaluated in urgent care or PCP settings or simply treated at home. Thank goodness for ICD-10! Finally, what goal is being met by analyzing data that is in essence obsolete? The clinical setting has changed due to stricter FDA regulations enacted upon tanning beds in 2014. In the end, this report seems like it was an easy way to pad someone's CV for very little effort.
