

RESEARCH LETTER

Assessing Knowledge of Appropriate Sunscreen Guidelines and Skin Cancer Prevention Among New York Yankees Attendees

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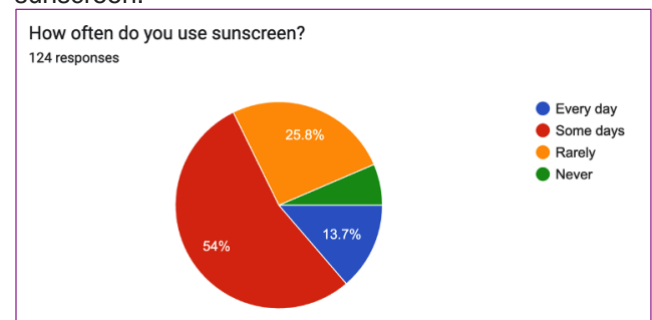
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As the rates of skin cancer continue to rise, patient education about skin cancer and appropriate sunscreen use become increasingly important.¹ Many patients are unfamiliar with key factors in skin cancer risk and prevention. Up to 61% of Americans have stated that they are not concerned with developing skin cancer, even those with multiple risk factors.² In addition, a previous survey has shown that the majority of patients lack adequate knowledge regarding sunscreen guidelines.³ Identifying educational gaps is important for determining the focus of future informational initiatives. Thus, the purpose of this study was to assess the general population's knowledge of skin cancer prevention and understanding of sunscreen application recommendations.

After obtaining an IRB exemption, we conducted a survey, which included questions about skin cancer and sunscreen application, at a New York Yankees baseball game. A total of 124 participants completed the survey of which 73.4% were male and 25% were female (1.6% chose not to say). The participants' average age and Fitzpatrick skin type were 49.6 years and 2.1, respectively. Thirty-three percent of respondents noted a family history of skin cancer while 8.1% had a personal history of skin cancer. However, only 13.7% of

participants endorsed using sunscreen daily, and 32.3% stated they rarely or never use sunscreen (**Figure 1**). Additionally, 22.5% of participants indicated that they never reapply sunscreen when out in the sun. 42.3% of respondents have never seen a dermatologist (**Figure 2**). 40.5% incorrectly selected the dermatologist recommended minimum protective sun protective factor (spf) for sunscreen, and only 36.7% correctly chose the appropriate recommendation for how often sunscreen should be reapplied (**Figure 3**). Lastly, 20.3% of participants had applied sunscreen on the day of the survey, despite knowing they would be outside for a significant period of time at the baseball game.

Figure 1. How often respondents reported using sunscreen.



Limitations of the study include some lack of generalizability given the single survey location and insufficient sample size for

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Figure 2. How often respondents report seeing a dermatologist.

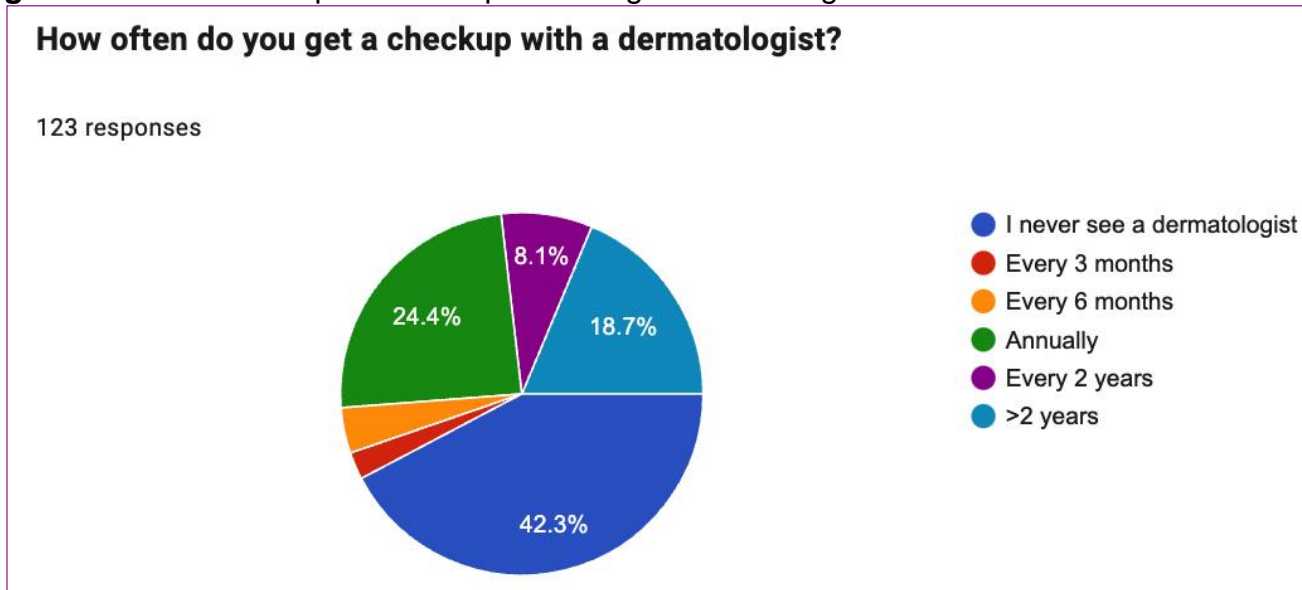
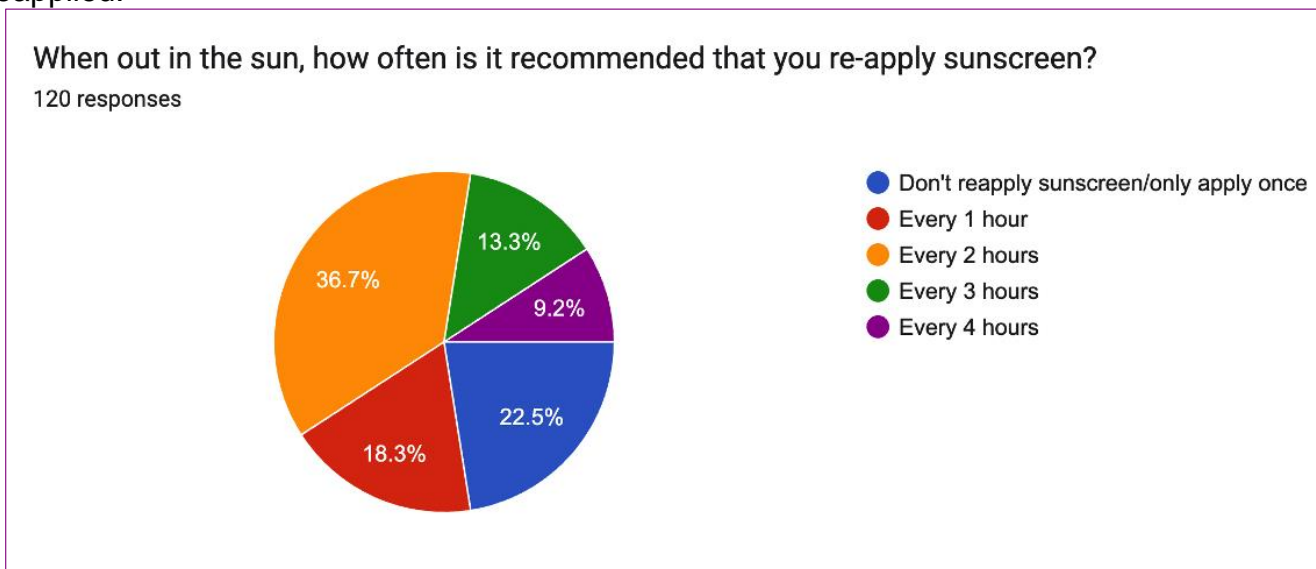


Figure 3. Respondents selections of how often they think it is recommended for sunscreen to be reapplied.



statistical significance. Nonetheless, the results demonstrate a clear gap in the understanding of recommended sunscreen guidelines and inadequate utilization of dermatological care, especially considering that a baseball game presents a known sun-exposed environment. A previous survey by Vasicek et al. found that 41% of respondents selected the incorrect frequency of proper sunscreen use while 40% chose the

inappropriate minimum spf, similar to our results.³ In addition, only 44% of participants stated they had previously been counseled on appropriate sunscreen use.³ Routine full body skin exams are recommended by dermatologists every two to three years, if not more frequently when patients are deemed high-risk.⁴ Our results show that there still remains a subsection of the population that lacks access to adequate dermatological

care, which could be true for a multitude of reasons. Larger scale survey studies conducted at multiple sites with more participants are needed to further characterize the lack of knowledge and need for counseling in the population. Continued educational initiatives, such as the semiannual free skin cancer screening offered at New York Yankees games, can help patients become comfortable with accessing dermatological care and be more informed on sunscreen utilization and skin cancer prevention.

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References:

1. Leiter U, Eigentler T, Garbe C. Epidemiology of skin cancer. *Adv Exp Med Biol*. 2014;810:120-140. doi:10.1007/978-1-4939-0437-2_7
2. Kucera K. Sunburns, Skin Aging and Skin Cancer: Surprising Attitudes. *Dermatology Education Foundation*. Published May 11, 2023. Accessed October 23, 2023. <https://dermnppa.org/skin-cancer/#:~:text=Although%20the%20number%20of%20new,concerned%20about%20developing%20skin%20cancer.>
3. Vasicek BE, Szpunar SM, Manz-Dulac LA. Patient Knowledge of Sunscreen Guidelines and Frequency of Physician Counseling: A Cross-sectional Study. *J Clin Aesthet Dermatol*. 2018;11(1):35-40.
4. Stevenson ML, Glazer AM, Cohen DE, Rigel DS, Rieder EA. Frequency of total body skin examinations among US dermatologists. *J Am Acad Dermatol*. 2017;76(2):343-344. doi:10.1016/j.jaad.2016.09.017