As shown in the Table, the mean (SD) annual out-of-pocket spending was $494 (640). The median (25th and 75th percentile) spending was $308 (120–638). Annual out-of-pocket spending exceeded $1000 for 1538 patients (12.6%) and comprised copays ($303 [61.3%]), deductibles ($77 [15.6%]), and coinsurance ($114 [23.1%]). A $25 cap would benefit 7302 patients (59.9%); their annual out-of-pocket spending would decrease from $741 to $261 (mean decrease, $481). A $100 cap would benefit 2151 patients (17.7%); their annual out-of-pocket spending would decrease from $1343 to $786 (mean decrease, $558) (Figure).

Among 3116 HDHP enrollees, the mean (SD) annual out-of-pocket spending was $643 (741). The median (25th and 75th percentile) spending was $428 (102–917). Annual out-of-pocket spending exceeded $1000 for 677 patients (21.7%) and comprised copays ($238 [37.0%]), deductibles ($171 [26.5%]), and coinsurance ($235 [36.5%]). A $25 cap would benefit a greater proportion of HDHP enrollees than nonenrollees (2277 of 3116 [72.1%] vs 5025 of 9069 [55.4%]; P < .001). Among those who would benefit, annual out-of-pocket spending would decrease more among HDHP enrollees ($628 vs $414; P = .02). A $100 cap would benefit a greater proportion of HDHP enrollees than nonenrollees (994 of 3116 [31.9%] vs 1157 of 9069 [12.8%]; P < .001). Among those would benefit, annual out-of-pocket spending would decrease to similar degrees ($549 vs $565; P = .60) (Figure).

Discussion | In 2018, mean out-of-pocket spending for insulin among privately insured children and young adults with type 1 diabetes was $494; for 1 in 8, spending was more than $1000. For perspective, 40% of those in the US lacked the savings to pay for a $400 emergency in 2018. For 60% and 18% of patients, out-of-pocket spending would decrease under national $25 and $100 caps, respectively. Caps would benefit HDHP enrollees more than nonenrollees.

Caps have limitations. They do not address rising insulin prices, improve insulin affordability for the uninsured, or limit cost-sharing for diabetes-related supplies, such as insulin pumps. Additional policies are needed to alleviate the financial burden among patients with type 1 diabetes.

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Prevalence of Spanking in US National Samples of 35-Year-Old Parents From 1993 to 2017

Spanking has been the subject of considerable research and discussion in popular culture. Reviews and state-of-the-art analyses support an association between corporal punishment (including spanking) and negative outcomes for children. Professional organizations (eg, American Academy of Pediatrics) have recently issued statements conveying unequivocal opposition to corporal punishment and support for alternative means of discipline.2

Sporadically, studies have presented prevalence estimates of corporal punishment from one-time national samples; together, they suggest a decrease over recent decades. However, to our knowledge, no repeated surveys have documented trends in the prevalence of spanking in the US.

Methods | We used national panel data from the Monitoring the Future (MFT) study on 25 consecutive cohorts (graduating high school seniors in 1976-2000) assessed 17 years later (data at modal age 35 years collected from 1993-2017). This study was approved by the University of Michigan institutional review board and informed consent (either passive
consent or active [i.e., written] consent, per school policy) was obtained at baseline from parents for students younger than 18 years and from students 18 years or older. Each year, MTF surveys a nationally representative sample of 12th graders (modal age 18 years). A subsample is randomly selected, oversampling for those with substance use, and periodically surveyed through adulthood; 29,604 participants (48.5%) of those eligible were retained at the modal age 35 years follow-up survey. The analytic sample included those reporting at least 1 child age 2 to 12 years living at home part-time or full-time (including biological, adopted, or stepchildren); after excluding 11,777 participants (39.8%) without children aged 2 to 12 years and 1,437 (4.9%) with missing data on child age or spanking, the analytic sample included 16,390 participants (Table). Parents in the analytic sample reported a mean (SD) of 1.8 (0.96) children aged 2 to 12 years (range, 1.7-1.9 mean number of children). The mean (SD) age of respondents' youngest child aged 2 to 12 years was 5.2 (3.3) years, which decreased over time, ranging from 5.8 (1993) to 4.8 (2013) years.

Respondents with children were asked, “How often do you spank your child(ren)?” Seven response options ranged from never or almost never to every day; responses were dichotomized to represent 0 (never/ almost never) vs 1 (more often [i.e., several times or more during the past year]).

We calculated prevalence of spanking for each cohort at modal age 35 years. We used JoinPoint (National Cancer Institute) to analyze the trend (i.e., whether the slope significantly differed from 0) and the best-fitting model in terms of the number of changes in the trend (joinpoints). Results were considered statistically significant at \( P < .05 \). We constructed weights to adjust for attrition (calculated as the inverse of the probability of participating at modal age 35 years based on age 18 years demographic characteristics) and an oversampling of those with substance use.6

Results | In a sample of parents at modal age 35 years with children aged 2 to 12 years, spanking declined over 25 years. The modeled prevalence of spanking decreased (slope = −0.005; SE = 0.001; \( P < .001 \)) from 50% in 1993 to 35% in 2017 (Figure). A zero-joinpoint model (i.e., a single decreasing trend) provided the best fit.

In post hoc analyses, the modeled prevalence for men decreased from 52% to 36% and for women from 48% to 35%. The modeled prevalence among a subset of parents with a child aged 2 to 4 years living at home (8,203 [50.0%]) decreased from 60% to 39%.

Discussion | To our knowledge, this study is the first to demonstrate a decreasing trend in US spanking prevalence in a repeated survey. The results correspond with single-year prevalence rates in other studies.3,4 Spanking has been reported to be highest with children age 2 to 4 years;4 this study’s results show a decrease across cohorts despite parents having slightly younger children in later cohorts. Spanking decreased among mothers and fathers from 1993 to 2017.

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>No. unweighted (%)d</th>
</tr>
</thead>
<tbody>
<tr>
<td>Marital status</td>
<td></td>
</tr>
<tr>
<td>Married or engaged</td>
<td>14,273 (86.2)</td>
</tr>
<tr>
<td>Separated or divorced</td>
<td>1,331 (8.3)</td>
</tr>
<tr>
<td>Single or widowed</td>
<td>702 (5.5)</td>
</tr>
<tr>
<td>Sex</td>
<td></td>
</tr>
<tr>
<td>Women</td>
<td>9,981 (56.4)</td>
</tr>
<tr>
<td>Men</td>
<td>6,409 (43.6)</td>
</tr>
<tr>
<td>Race/ethnicityb</td>
<td></td>
</tr>
<tr>
<td>White</td>
<td>13,953 (76.2)</td>
</tr>
<tr>
<td>Black</td>
<td>941 (11.3)</td>
</tr>
<tr>
<td>Hispanic</td>
<td>669 (6.9)</td>
</tr>
<tr>
<td>Asian</td>
<td>202 (1.7)</td>
</tr>
<tr>
<td>Other</td>
<td>488 (3.9)</td>
</tr>
<tr>
<td>Completed bachelor’s degree or higher</td>
<td></td>
</tr>
<tr>
<td>No</td>
<td>9,146 (56.8)</td>
</tr>
<tr>
<td>Yes</td>
<td>7,044 (41.7)</td>
</tr>
</tbody>
</table>

a Totals may not equal 16,390 because of missing data.

b Respondents were asked to select 1 of 9 race/ethnicity descriptions, which were collapsed in the Table.
This study makes a substantial contribution by describing spanking epidemiology over 25 consecutive cohorts of age-homogenous parents. The data reflect parents’ use of spanking rather than whether a specific child was spanked. The primary limitation of these data was the single-item measure of spanking with limited response options. Although a downward trend was observed, there is a clear need for ongoing education about alternative discipline strategies.

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Correction: This article was corrected on March 15, 2021, to fix an error in the y-axis label of the Figure.

Author Contributions: Dr Mehus had full access to all of the data in the study and takes responsibility for the integrity of the data and the accuracy of the data analysis.

Concept and design: All authors.

Acquisition, analysis, or interpretation of data: All authors.

Drafting of the manuscript: Mehus.

Critical revision of the manuscript for important intellectual content: Patrick.

Statistical analysis: Mehus.

Obtained funding: Patrick.

Administrative, technical, or material support: Patrick.

Supervision: Patrick.

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Pediatric Patient and Caregiver Values in Treatment Decision-making for Uncomplicated Appendicitis

Nonoperative management (NOM) with antibiotics alone has been shown to be safe for uncomplicated appendicitis in pediatric patients.1-3 Shared decision-making to choose between 2 treatments may be facilitated by a better understanding of how patients and caregivers value the specific risks and benefits of each treatment and how those are associated with their treatment decisions.4 A recent survey of parents of children who were healthy showed that 42% of caregivers preferred NOM for their child’s appendicitis; however, these families were making only a hypothetical treatment decision, and factors affecting their preferences were not solicited.5 Our objective in this study was to compare values regarding the risks and benefits of each treatment option between patient-caregiver dyads who chose surgery vs NOM for the child’s appendicitis.

Methods | As part of a randomized clinical trial (NCT02110485), patients were evaluated by a research team physician who introduced both treatment options, answered initial questions, and then randomized patient-caregiver dyads to receive a scripted standardized surgical consultation with or without a tablet-based patient activation tool (https://vimeo.com/91207174). This study was approved by the Nationwide Children’s Hospital institutional review board and written consent was obtained from all participants, with assent obtained from children 9 years and older. Patients aged 7 to 17 years and their caregivers were enrolled from March 2014 to April 2016. All dyads who used the patient activation tool received the same information about each treatment’s expected course and associated risks and benefits and subsequently completed a values exercise rating the importance of 8 treatment-associated risks and benefits of surgery vs NOM using a 5-point Likert scale.6 Three questions assessed aversion to risks of surgical management, 3 assessed aversion to risks of NOM, and 2 assessed preferences associated with missing school or activities and work. After exercise completion, they chose surgery or NOM for the child’s appendicitis treatment.

Value scores were compared by treatment decision using Cochran-Armitage tests, with a significance threshold set at P < .05. Data analysis for this report was performed from July 2019 to March 2020, and SAS Enterprise Guide 7.1 (SAS Institute) was used for all statistical analyses.

Results | Of 96 individual participants, 66 (69%) chose surgery and 30 (31%) chose NOM. The median age of included children was 12 (interquartile range, 10-14) years, with 58 male participants of 96 total participants (60%). There were no significant differences between participants choosing surgery vs NOM in levels of education, income, employment, or marital status; however, patient-caregiver dyads choosing surgery were more likely to have been transferred from another institution (29 of 66 [43.9%] vs 7 of 30 [23.3%]; P = .03) and speak primarily English at home (59 of 61 [91.8%] vs 23 of 30 [76.7%]; P = .04). Mean scores for each treatment-associated risk or benefit according to treatment choice are shown in the Figure. In the group choosing surgery, the highest 3 priorities were avoid-