

Table A. The Healthcare Common Procedure Coding System Codes Included in the Study

<u>HCPCS</u>	<u>Count</u>	<u>Count among the 103,750 Included Injections</u>	<u>Description</u>
62311	144,169	120,487	Lumbar epidural
64483	41,340	35,560	Lumbar or sacral transforaminal epidural injection, with imaging guidance, 1 st level
62323	22,119	20,106	Lumbar/Caudal epidural with imaging guidance
64484	5,946	5,094	Lumbar or sacral transforaminal epidural injection, with imaging guidance, each additional level
62322	1,553	1,066	Lumbar/Caudal interlaminar epidural without imaging guidance
J1040	41,509	41,385	Methylprednisolone 80 mg
J1030	14,179	14,094	Methylprednisolone 40 mg
J2930	200	118	Methylprednisolone sodium succinate, up to 125 mg
J2920	173	152	Methylprednisolone sodium succinate, up to 40 mg
J1020	24	24	Methylprednisolone 20 mg (Depo-Medrol)
J3301	40,232	40,016	Triamcinolone acetonide (Kenalog)
J3302	57	57	Triamcinolone diacetate
J3300	56	56	Triamcinolone preservative free
J1100	14,754	14,658	Dexamethasone sodium phosphate
J0702	4,003	3,986	Betamethasone (Celestone)

The percentages of the epidural steroid injections being the 5th or more were 2.26% for the two transforaminal only codes of 64483 or 64484 (95% Bonferroni adjusted confidence interval 1.91% to 2.64%); 1.95% for the interlaminar code of 62322 (0.48% to 5.11%); and 1.82% for the two older codes 62311 and 62323 (1.66% to 1.99%). Comparing the 481/ 21,318 for 64483 or 64484 versus 10/ 512 for 62322, there was no significant difference by Fisher's exact test ($P = .764$).

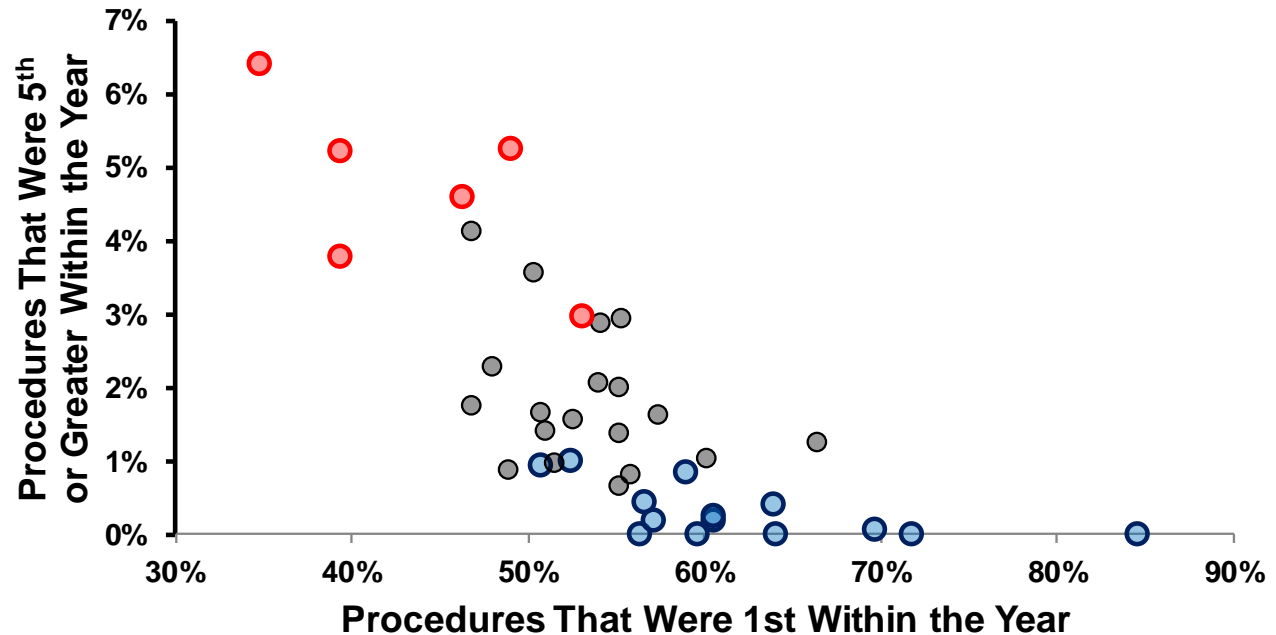
None of the rare injectable steroid types influenced results, even if they were errors in recording what subtype of that steroid was used.

Table B. STROBE Statement—Checklist of items that should be included in reports of *cohort studies*, with page numbers being that of the uploaded Word file

	Page	Recommendation
Title and abstract	2	<p>(a) Indicate the study's design with a commonly used term in the title or the abstract</p> <p>(b) Provide in the abstract an informative and balanced summary of what was done and what was found</p>
Introduction		
Background/rationale	4	Explain the scientific background and rationale for the investigation being reported
Objectives	4	State specific objectives, including any prespecified hypotheses
Methods		
Study design	6	Present key elements of study design early in the paper
Setting	6	Describe the setting, locations, and relevant dates, including periods of recruitment, exposure, follow-up, and data collection
Participants	6	<p>(a) Give the eligibility criteria, and the sources and methods of selection of participants. Describe methods of follow-up</p> <p>(b) For matched studies, give matching criteria and number of exposed and unexposed</p>
Variables	6	Clearly define all outcomes, exposures, predictors, potential confounders, and effect modifiers. Give diagnostic criteria, if applicable
Data sources/ measurement	6	For each variable of interest, give sources of data and details of methods of assessment (measurement). Describe comparability of assessment methods if there is more than one group
Bias	7	Describe any efforts to address potential sources of bias
Study size	6	Explain how the study size was arrived at
Quantitative variables	7	Explain how quantitative variables were handled in the analyses. If applicable, describe which groupings were chosen and why
Statistical methods	7	<p>(a) Describe all statistical methods, including those used to control for confounding</p> <p>(b) Describe any methods used to examine subgroups and interactions</p> <p>(c) Explain how missing data were addressed</p> <p>(d) If applicable, explain how loss to follow-up was addressed</p> <p>(e) Describe any sensitivity analyses</p>
Results		
Participants	9	<p>(a) Report numbers of individuals at each stage of study—eg numbers potentially eligible, examined for eligibility, confirmed eligible, included in the study, completing follow-up, and analysed</p> <p>(b) Give reasons for non-participation at each stage</p> <p>(c) Consider use of a flow diagram</p>

Descriptive data	19	(a) Give characteristics of study participants (eg demographic, clinical, social) and information on exposures and potential confounders (b) Indicate number of participants with missing data for each variable of interest (c) Summarise follow-up time (eg, average and total amount)
Outcome data	N/A	Report numbers of outcome events or summary measures over time
Main results	1	(a) Give unadjusted estimates and, if applicable, confounder-adjusted estimates and their precision (eg, 95% confidence interval). Make clear which confounders were adjusted for and why they were included (b) Report category boundaries when continuous variables were categorized (c) If relevant, consider translating estimates of relative risk into absolute risk for a meaningful time period
Other analyses	1	Report other analyses done—eg analyses of subgroups and interactions, and sensitivity analyses
Discussion		
Key results	11	Summarise key results with reference to study objectives
Limitations	12	Discuss limitations of the study, taking into account sources of potential bias or imprecision. Discuss both direction and magnitude of any potential bias
Interpretation	13	Give a cautious overall interpretation of results considering objectives, limitations, multiplicity of analyses, results from similar studies, and other relevant evidence
Generalisability	11	Discuss the generalisability (external validity) of the study results
Other information		
Funding	1	Give the source of funding and the role of the funders for the present study and, if applicable, for the original study on which the present article is based

Figure A. Negative correlation among the 39 hospitals between the percentages of steroid injections that were i) the 5th or greater during the year and ii) 1st within the year.



The figure includes the 39 hospitals in Iowa performing overall at least 1 such injection every 4 days. The colors are the same as Figure 2. Specifically, there were 14 hospitals (in blue) with the prevalences of 5th or greater injections significantly smaller than the overall prevalence. There were 6 (in red) with significantly greater than the overall prevalences. The Spearman rank correlation for the association shown in this Figure A was 0.792 (SE 0.067), $P < .00001$. Among the 6 hospitals that were outliers (red), the median percentage of injections that was the patient's 1st for the year was 42.9%. In contrast, at the hospital with the one accredited pain medicine fellowship in the state, the prevalence was 63.9%. As explained in the legend of Figure 2, that training program had 0.4% of its injections that were the 5th or greater (N=10/2589), not significantly different from the 0.1% (N=3/2087, Fisher's exact test $P=.16$) reported by Mayo Clinic⁸ and 0.4% (N=2/540, $P=.99$) reported by Wooridul Spine Hospital, Seoul, Korea.²⁴.