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OPEN PEER REVIEW

Assessment of Community Pharmacists' Performance in Managing Pediatric Fever and Pain: A Simulated Patient Study in Tehran

Arash Hosseini Siyanaki, Shadi Sarahroodi

SUBMITTED	REVISED	ACCEPTED	DOI
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About this report

This open peer review (OPR) report shows the public comments made on this article during peer review, by the reviewers, the associate editor and the editor-in-chief, for every revision round, together with the authors' replies. Comments appear only with the consent of the people who wrote them. Reviewers who chose to sign their report are named; the others are shown as "Referee". Comments are edited for language only, and confidential remarks to the editors are not included.

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1 Original submission

4 comments · 13 Feb 2026 – 22 Feb 2026

Referee 1 Reviewer

MINOR REVISION 13 Feb 2026

With greetings and respect,
This is a valuable article, and acceptance is recommended after the following revisions:
In the Introduction section, explain the importance of the topic in greater detail.
In the Discussion section, use more recent similar studies. In the References section, use more references and more recent sources.
Thank you.

Referee 2 Reviewer

ACCEPT 19 Feb 2026

There is no public comment.

Associate Editor

MAJOR REVISION 22 Feb 2026

Dear EIC,
Thanks to the authors and appreciation to the researchers. The manuscript presents valuable research. However, some revisions are needed. The authors should revise it based on the comments. Minor changes should also be made to the abstract:
1- The study design should be mentioned in the first line of the methods section of the ABSTRACT.
2-A summary of the statistical analysis results should be mentioned in the results section of the ABSTRACT.

Editor-in-Chief

MAJOR REVISION 22 Feb 2026

Dear Author,
Thank you for submitting the article. It needs some revision. Please revise it based on the reviewers' and AE's comments.

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Revision 1

AUTHORS' RESPONSE TO REVIEWERS

Authors' reply to reviewers

The next pages contain the authors' point-by-point reply to the comments of this revision round, as submitted with the revised manuscript. It is published as the authors wrote it.

Dear EIC Journal of Comprehensive Pediatrics,
We would like to express our sincere gratitude for your insightful comments and constructive feedback on our manuscript. We have carefully addressed each of your concerns to enhance the methodological transparency and statistical rigor of our study. Below is a point-by-point response to your specific requests.

Reviewer 0:
Dear Author
Thank you for submission
This is a valuable study on a common problem in children
There are some notes
Introduction:
- PLS give the clarification on the importance of knowing the results of this study for our system and give the results of other studies in IRAN
Response: Thank you very much for reading our manuscript and your valuable comments. We have updated the Introduction to explicitly state the clinical and systemic importance of our findings. We now highlight the pharmacist's role as the "primary gatekeeper" in Iran's healthcare system and reference similar findings from other Iranian cities (such as Mashhad and Isfahan) to provide a complete national context for our research. (lines 49-56)
Method:
- Give a standardized script in description of the case, it is needed for SP to know the degree of fever, red flags, duration, or whether the patient has otitis media . If they are asked they should response a fixed answer. Referral appropriateness (12.6%) cannot be evaluated without clinical severity context. Recommendation of diclofenac suppositories may be interpreted differently depending on scenario severity.
Response: We have addressed this by including a detailed breakdown of the standardized scenario and script in the Methods section and Table 1. To clarify the clinical context: the case was designed as a moderate-severity pediatric fever (38.5°C) with a duration of 6 hours. Crucially, the SP reported localized ear pain but no "hard" red flags (e.g., lethargy, stiff neck, or vomiting).
This specific context justifies our evaluation of referral and medication appropriateness:

- Referral: Ear pain in a 2-year-old requires medical assessment to rule out otitis media; therefore, a referral was mandatory for a high score.
- Diclofenac: In a simple fever/pain scenario without inflammatory justification, recommending a potent, second-line NSAID like Diclofenac was categorized as irrational/inappropriate according to standard pediatric guidelines (e.g., WHO and local protocols).(Lines 89-91 and 97-104)

- How did you standardized the scoring system . There is no description of scoring weight system . Pls explain scoring algorithm
Response: We have now explicitly detailed the weighting of our 100-point scoring system in the Methods section. The algorithm was developed based on clinical priority, ensuring that safety-critical steps (such as dosing and avoiding contraindications) carried the most weight. The 100 points were distributed as follows:

- History-Taking (30 pts): Assessment of age/weight (15 pts) and symptom duration/location (15 pts).
- Medication Appropriateness (30 pts): Safety-first approach. 30 pts for first-line analgesics; 0 pts for inappropriate choices (e.g., Diclofenac).
- Dosing Accuracy (20 pts): Technical precision in weight-based calculation.
- Counseling/Referral (20 pts): Professional judgment, including the mandatory referral for ear pain (10 pts) and non-drug advice (10 pts). (Lines 105- 118)

Results:
- Multivariate analysis to identify independent predictors of performance, Adjustment for potential confounders, Effect sizes (odds ratios, confidence intervals) are missing. Pls check for them. multivariable analysis for predictors of “Good/Excellent” vs. others is recommended
Response: We fully agree that a multivariable analysis would strengthen the paper. Unfortunately, the individual-level raw data were no longer available after the original study, preventing us from performing an adjusted logistic regression. To still provide effect sizes with confidence intervals, we have now calculated crude odds ratios for the main independent variables and present them in Table 7. We have also added a note in the Limitations section explaining that these are unadjusted and why a full multivariable model could not be conducted. (Line 161-165)

- The finding that urban pharmacies outperformed hospital pharmacies is unexpected and insufficiently explored. sample size is imbalanced (266 VS 29) so the validity of result is comprised
Response: Urban pharmacists in Tehran handle these kinds of "walk-in" pediatric cases much more often than hospital pharmacists, who may be more focused on inpatient needs. You are right about the sample size (266 vs 29), so we used **Fisher’s Exact Test** to make sure the comparison was still statistically valid. We've also added a note in our "Limitations" section to stay transparent about this imbalance. (Lines 157-160)

- Without scenario details the interpretation of referral, Diclofenac Recommendation has no validation support.

Response: We have added a detailed definition of 'non-pharmacological advice' to the **Methods section**. In our study, this was standardized to include three primary supportive care measures: oral hydration, appropriate clothing for fever, and proper tepid sponging techniques. Pharmacists were required to mention at least two of these strategies to receive points in this category. We have also clarified in the **Discussion** that the low rate of such advice (9.8%) highlights a significant area for improvement in pediatric pharmacy counseling. (Lines 111-118)

- Clarify what constituted non pharmacological advice
Response: We've added a clear definition to the Methods. Essentially, for a pharmacist to get credit here, they had to suggest at least two practical, non-drug steps: increasing fluids, using light clothing, or explaining how to do a proper tepid sponge (and warning against using alcohol or ice). We noticed only 9.8% of pharmacists did this, which we've now highlighted as a key area for improvement in the Discussion. (Lines 111-118)

- Tables: Several discrepancies exist between Results text and Tables: Text reports 86.5% appropriate recommendation; Table 3 shows 97.3%. Weight-based dosing reported as 67% in text, 75.3% in tables. Performance category percentages differ between text and Table 4.
Response: Thank you for catching these errors. We have carefully re-checked all percentages and corrected every discrepancy. The results text now exactly matches the tables: 97.3% of pharmacists recommended a first-line analgesic, 75.3% calculated the dose by weight, and all performance-category percentages are consistent. In addition, the net appropriate management rate (first-line analgesic without diclofenac) is now correctly reported as 83.8% in the Abstract and Discussion. All changes are highlighted in the main manuscript.

- There is possible recall bias documentation.
Response: We completely agree that memory can be unreliable. To prevent this, our researcher filled out the assessment forms immediately after leaving each pharmacy—usually while still in the car—before moving on to the next location. This ensured the 3–5 minute interaction was recorded while it was still fresh. We've added this detail to the "Data Collection" section. (Lines 87-89)

Discussion:
- Pls give more balanced review with Knowledge studies, Attitude surveys and Behavioral simulated practice evaluation
Response: This is an excellent point. We have revised the Discussion to highlight the "Knowledge-to-Action" gap. We compared our behavioral results (from the SP method) with traditional Knowledge and Attitude surveys. This comparison helps explain why pharmacists might score well on written tests but still miss critical clinical steps—like checking pain

intensity or giving non-drug advice—during a real-world interaction. (Lines 180-187)

Conclusion:
- This part should be separated with key results and recommendation for furthur studiues
Response: We have simplified and restructured the end of the paper. We now clearly separate the Key Findings from our Recommendations for the future. This structure makes it easier to see the gap between the pharmacists' strong technical skills and their need for better clinical communication. (Lines 235-241)

Reviewer 1: Greetings and with respect. This is a valuable article, and after the revisions are made, its acceptance is recommended: In the introduction, the importance of the topic should be explained further. In the discussion, more recent similar studies should be used. In the references, more recent and additional sources should also be used. With thanks.

Thank you for your kindness and careful review. In the revised version, the importance of the topic was expanded in the introduction and explained with reference to similar studies in Iran (such as Mashhad and Isfahan). In addition, more recent studies (including 2022 and 2023 sources) were used in the discussion, and the references were updated; these changes are highlighted in yellow.

Associate Editor 0:
Dear EIC,
Thanks to the authors and appreciation to the researchers. The manuscript is a valuable research. But some revisions are needed. Authors should revise it based on comments. Also minor changes should be done in abstract:

1- Study design should be mentioned in first line of method section of ABSTRACT

Response: As requested, we have moved the **study design** (descriptive-analytical, cross-sectional) to the very first line of the Methods section in the Abstract.

2-Summary of Statistical analysis results should be mention in result section of ABSTRACT.

Response: We have also included a summary of the statistical analysis in the Results section of the Abstract, specifically highlighting the significant difference between urban and hospital settings (P=0.031) and the lack of impact from demographic factors.

We believe these revisions have significantly strengthened the manuscript and addressed all the concerns raised. We hope the revised version is now acceptable for publication.

Sincerely,

Shadi Sarahroodi
Pharm.D & PhD

Assistant prof. of pharmacology
School of Pharmacy, Tehran Medical Sciences Islamic Azad University

[Translated from Persian by the Brieflands editorial office.]

2 Revision 1

2 comments · 9 May 2026 – 9 May 2026

Associate Editor

MINOR REVISION 9 May 2026

Dear Authors,

Thank you for submitting the revised version of your manuscript and the point-by-point response to the reviewers' comments.

We have reviewed the revised manuscript and your responses. Many of the reviewers' and Associate Editor's comments have been properly addressed. In particular, the following revisions were satisfactorily completed:

Properly addressed items:

* The Introduction was expanded to clarify the importance of the study for the Iranian healthcare/pharmacy system.
* Relevant Iranian and newer international studies were added to strengthen the Introduction and Discussion.
* The standardized simulated patient scenario was added, including the degree of fever, duration, ear pain, red-flag symptoms, and fixed responses.
* The scoring system and weighted 100-point algorithm were explained in the Methods section.
* The definition of non-pharmacological advice was clarified.
* The possible recall-bias issue was addressed by explaining that the assessment form was completed immediately after each pharmacy visit.
* The Discussion was improved by distinguishing knowledge/attitude studies from behavioral simulated-patient evaluation.
* The Conclusion was separated into key findings and future recommendations.
* The Abstract now mentions the study design in the Methods section.
* The Abstract now includes a brief summary of statistical findings.

However, before the manuscript can proceed to final editorial consideration, the following remaining issues must be corrected.

To-Do List:

1. Clarify the statistical analysis limitation more explicitly.

* The reviewer requested multivariable analysis and adjustment for potential confounders.
* Since adjusted multivariable regression could not be performed, please clearly state in the Results and/or Limitations that the odds ratios are unadjusted and exploratory.
* Please avoid wording that may imply independent predictors were identified.

2. Correct all remaining numerical discrepancies between the Results text and the tables.

* Some percentages in the Results section still do not match the final tables.
* In particular, please recheck the performance-category percentages in the Results section against Table 5.
* Please also recheck the history-taking percentages in the Results section against Table 3.
* The final manuscript must use consistent denominators and percentages throughout the Abstract, Results, Discussion, and tables.

Please revise the manuscript accordingly and submit a clean corrected version together with a brief response explaining exactly where these final corrections were made.

Sincerely,

Associate Editor

Editor-in-Chief

MINOR REVISION 9 May 2026

Dear Authors,

Thank you for submitting the revised version of your manuscript and the point-by-point response to the reviewers' comments.

We have reviewed the revised manuscript and your responses. Many of the reviewers' and Associate Editor's comments have been properly addressed. In particular, the following revisions were satisfactorily completed:

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* The Abstract now includes a brief summary of statistical findings.

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* Some percentages in the Results section still do not match the final tables.
* In particular, please recheck the performance-category percentages in the Results section against Table 5.
* Please also recheck the history-taking percentages in the Results section against Table 3.
* The final manuscript must use consistent denominators and percentages throughout the Abstract, Results, Discussion, and tables.

Sincerely,

Editor-in-Chief

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Revision 2

AUTHORS' RESPONSE TO REVIEWERS

Authors' reply to reviewers

The next pages contain the authors' point-by-point reply to the comments of this revision round, as submitted with the revised manuscript. It is published as the authors wrote it.

Dear Editor-in-Chief,

We sincerely thank you for the opportunity to improve our manuscript. Below we address each of the final requests in detail.

1. Clarify the statistical analysis limitation more explicitly.

* The reviewer requested multivariable analysis and adjustment for potential confounders.
* Since adjusted multivariable regression could not be performed, please clearly state in the Results and/or Limitations that the odds ratios are unadjusted and exploratory.
* Please avoid wording that may imply independent predictors were identified.

We appreciate this careful guidance regarding the statistical reporting. We agree that without an adjusted multivariable model, the results must be framed as exploratory and should not be interpreted as identifying independent predictors.

In the revised manuscript we have therefore taken the following steps:

- All effect estimates are explicitly labeled as **crude (unadjusted) odds ratios** in the Methods, Results, and the new Table 7.
- The Results section now describes the associations as *"unadjusted analyses"* and includes the explicit note that *"these analyses are exploratory and do not identify independent predictors of performance."*
- The Limitations section states clearly that *"because individual-level raw data were not retained after the original study, a multivariable logistic regression could not be conducted; the odds ratios presented are therefore unadjusted and should be interpreted conservatively."*
- We have removed any wording that could imply the factors were independent predictors and instead use phrases such as *"significant association"* and *"borderline positive association"* in a bivariate context.

We believe these changes fully address the concern, and we thank the reviewer for insisting on this clarity.

2. Correct all remaining numerical discrepancies between the Results text and the tables.

* Some percentages in the Results section still do not match the final tables.
* In particular, please recheck the performance-category percentages in the Results section against Table 5.
* Please also recheck the history-taking percentages in the Results section against Table 3.
* The final manuscript must use consistent denominators and percentages throughout the Abstract, Results, Discussion, and tables.

Thank you for this careful check. We went back and re-checked every percentage in the Results against the tables, and we did find several slips where the numbers didn't match. We've now corrected them all.

- The history-taking percentages (age, fever duration, fever intensity, pain duration, and restlessness) now align exactly with **Table 3**.
- The performance-category percentages (Excellent, Good, Weak, Very Weak) now match **Table 5**.
- The combined "Good/Excellent" figure in the Discussion was also slightly off—it should have been **19.3%**, not 17.1%—and we've updated it.

The same denominators (296 for present pharmacists, 295 for the final scoring) are used consistently throughout the Abstract, Results, Discussion, and all the tables. For your convenience, we have highlighted all the corrected percentages in **green** in the revised manuscript so you can quickly spot the changes. We're sorry for the earlier errors and grateful that you spotted them.

3. Improve your references:

Please read the comments below and try to improve your references.

As part of the review process, we would like to draw the authors' attention to several recent publications that may be relevant to their study. These references are suggested to help strengthen the manuscript's background, contextualize its findings within the broader literature, and ensure that it reflects the most up-to-date research in the field. These references are provided solely as suggestions, and citing them is not mandatory. The aim is to enhance the academic rigor and comprehensiveness of the manuscript.

These article(s) are as below:

1. **Fever Without Focus (FWF) in Children: A Cross-Sectional Study**
   Reason: This article discusses pediatric fever, which aligns with the authors' focus on managing fever in children.
   Link: https://doi.org/10.5812/jcp-165818

2. **The Impact of Group Psychoeducation for Mothers of Children with Cerebral Palsy: A Randomized Controlled Trial**
   Reason: This study addresses pain management strategies and parental engagement, which may provide useful insights for community pharmacists.
   Link: https://doi.org/10.5812/mejrh-146484

3. **Effectiveness of Twin-Beam Dual-Energy Computed Tomography in Characterization of Solitary Pulmonary Nodules Larger Than 5 mm**
   Reason: While primarily focused on imaging, this article contributes to understanding healthcare interventions and outcomes, relevant to the effectiveness of pharmacist-led initiatives in pediatric care.
   Link: https://doi.org/10.5812/iranjradiol-149360

We sincerely thank the editorial board for the suggested references. We have now incorporated the article on pediatric fever without focus (doi:10.5812/jcp-165818) into our manuscript, as it directly supports the clinical context of our study. We also found the psychoeducation article (doi:10.5812/mejrh-146484) relevant to caregiver education and have cited it in the Discussion. As for the third suggestion on dual-energy CT for solitary pulmonary nodules, we respectfully note that it lies outside the focus of our pharmacist-led pediatric pain and fever study and have therefore not included it. We hope these additions strengthen the manuscript.

We are grateful for the careful review and believe the manuscript is now significantly strengthened. All corrections are highlighted in green in the revised manuscript for your convenience.

Sincerely,

Shadi Sarahroodi

Pharm.D & PhD
School of pharmacy, Tehran Medical

Sciences Islamic Azad University

3 Revision 2

1 comment · 16 May 2026

Editor-in-Chief

MAJOR REVISION 16 May 2026

Dear Authors,

Thank you for submitting the revised manuscript and the point-by-point response to the final editorial comments.

We have reviewed the revised files carefully. Several important items have now been properly addressed.

Properly Addressed Items:

* The manuscript now clearly states that the odds ratios are crude/unadjusted.
* The Methods section explains that multivariable logistic regression could not be performed because individual-level raw data were not retained.
* The Results section now frames the analyses as unadjusted and exploratory.
* The manuscript avoids wording that would imply that independent predictors of pharmacist performance were identified.
* The main history-taking percentages in the Results section have been corrected to match Table 3.
* The main performance-category percentages in the Results section have been corrected to match Table 5.
* The Discussion now reports the combined Good/Excellent percentage as 19.3%.

However, before the manuscript can proceed to final editorial consideration, the following remaining issues must still be corrected.

To-Do List:

1. Correct the denominator wording in the Abstract.

The Abstract currently states “Out of 296 interactions” while reporting the overall performance-category percentage of 51.2% Moderate. This percentage is based on 151/295 evaluable pharmacists, not 296 interactions. Please revise the Abstract so that the denominator is accurate and consistent with Table 5.

2. Recheck and correct Table 7 statistical reporting.

Table 7 still appears to contain internal inconsistencies between the reported high-performance/suboptimal counts, crude odds ratios, confidence intervals, and P-values. In particular, the P-values reported for pharmacy type and gender do not appear to align with the binary counts and the reported odds ratios/confidence intervals.

Please recalculate or correct Table 7 so that all counts, crude ORs, 95% confidence intervals, and P-values are statistically consistent. Please also ensure that the Results text is updated accordingly if any values change.

Please submit a clean corrected version of the manuscript together with a brief response explaining exactly where these final corrections were made.

Sincerely,

Editor-in-Chief

4

Revision 3

AUTHORS' RESPONSE TO REVIEWERS

Authors' reply to reviewers

The next pages contain the authors' point-by-point reply to the comments of this revision round, as submitted with the revised manuscript. It is published as the authors wrote it.

Dear Editor-in-Chief,

Thank you for your careful final review of our manuscript (Revision 2).
We have addressed both remaining items as requested:

1. Correct the denominator wording in the Abstract.
The Abstract currently states “Out of 296 interactions” while reporting the overall performance-category percentage of 51.2% Moderate. This percentage is based on 151/295 evaluable pharmacists, not 296 interactions. Please revise the Abstract so that the denominator is accurate and consistent with Table 5.
We have corrected the Abstract. The sentence now reads:
“Of the 295 evaluable pharmacists, the majority of pharmacists (51.2%) demonstrated ‘Moderate’ performance.”
This matches Table 5 (total N = 295). The change has been **highlighted in green** in the manuscript.

2. Recheck and correct Table 7 statistical reporting.

Table 7 still appears to contain internal inconsistencies between the reported high-performance/suboptimal counts, crude odds ratios, confidence intervals, and P-values. In particular, the P-values reported for pharmacy type and gender do not appear to align with the binary counts and the reported odds ratios/confidence intervals.

Please recalculate or correct Table 7 so that all counts, crude ORs, 95% confidence intervals, and P-values are statistically consistent. Please also ensure that the Results text is updated accordingly if any values change.
We have corrected Table 7 as follows:

- **Pharmacy type:** The P-value was corrected from 0.031 to **0.421** (Fisher’s exact test). The OR (1.56) and 95% CI (0.52–4.66) now correctly align with a non-significant result. The updated P-value is highlighted in the table.
- **Gender:** The 95% confidence interval for the crude OR (1.98) was recalculated using the exact (conditional) method to match the Fisher’s exact P-value of 0.061. The corrected CI is **0.96–4.09** (previously 1.09–3.60). This interval now includes 1.0, consistent with the non-significant P-value. The corrected CI is highlighted in the table.

- **Age group:** No change; already consistent (OR = 0.85, 95% CI: 0.47–1.53, P = 0.961).

The corresponding sentence in the **Results** section has also been updated to reflect the corrected gender CI (**0.96–4.09**), and this change is highlighted.

And all other counts, percentages, and odds ratios remain unchanged. The table is now internally consistent. All corrections are highlighted in green in the revised manuscript for your convenience.

Sincerely,

Shadi Sarahroodi

Pharm.D & PhD

School of pharmacy, Tehran Medical

Sciences Islamic Azad University

4 Revision 3

2 comments · 18 May 2026 – 18 May 2026

Associate Editor

ACCEPT 18 May 2026

Dear EIC.
Previous errors have been corrected, and there are no further recommendations.

Editor-in-Chief

ACCEPT 18 May 2026

Dear Authors,

Thank you for addressing the identified issues and responding to my queries. Your revisions have substantially improved the manuscript, and it is now considered acceptable for publication. Congratulations on your hard work and commitment to enhancing the quality of your research.