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OPEN PEER REVIEW

The Prevalence of Colonization with Carbapenem-resistant *Enterobacteriaceae*, *Escherichia coli*, *Klebsiella* and *Enterobacter*, and Related Risk Factors in Children

Shahnaz Armin, Leila Azimi, Ghazal Shariatpanahi, Armin Shirvani, Nasim Almasian Tehrani

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.

More about open peer review: brieflands.com/knowledgebase/opr

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1 Original submission

2 comments · 9 Jan 2023 – 28 Jan 2023

Referee 1 Reviewer

MINOR REVISION 9 Jan 2023

Dear Colleague,

I read your valuable article.

A few comments regarding your manuscript are as follows:

1. Please explain more about the underlying diseases that are mentioned as risk factors.

2. Summarize the key results with reference to the study objective.

3. You have not explained the demographic characteristics of the patients and the correlation of this resistance with them.

Associate Editor

MINOR REVISION 28 Jan 2023

Dear Editor-in-Chief of APID,
The submitted manuscript entitled “The prevalence of colonization with carbapenem-resistant Enterobacteriaceae, E. coli, Klebsiella and Enterobacter, and related risk factors in children” was reviewed. Comments from the reviewers are shown below:

Sincerely,

Reviewer 1:
Dear Colleague
I read your valuable article.
A few comments regarding your manuscript are as follows:
1. Please explain more about the underlying diseases that are mentioned as risk factors.
2. Summarize the key results with reference to the study objective.
3. You have not explained the demographic characteristics of the patients and the correlation of this resistance with them.
Reviewer 2:
The prevalence of colonization with carbapenem-resistant Enterobacteriaceae, E. coli, Klebsiella and Enterobacter, and related risk factors in children
Method
If all patients signed the consent form, what is meant by “anonymous and unverifiable patients”?
IBM SPSS v22 was not developed in Chicago. (Versions that were produced by SPSS Inc. before the IBM acquisition (Versions 18 and earlier) would be given an origin or publisher of SPSS Inc. in Chicago. Versions that were released after the acquisition would be given an origin or publisher of IBM Corp. in Armonk, NY.)
Result
What would be the advantages of reporting the resistant-to-non-resistant ratio instead of the percentage of resistance, which is more familiar to the audience? Please replace the ratio with percentages or add percentages.
In all tables, report the total number of samples, the number of positive cultures, and counts (frequencies).
Please report the frequency of carbapenemase genes by microorganism, preferably in a table.

Acknowledgment

The name of the research center is not correct. (Also check the text of the manuscript.)

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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.

Reviewer 1:
Dear Colleague I read your valuable article
A few comments regarding your manuscript are as following:
1. Please explain more about the underlying diseases that are mentioned as risk factors.
2. Summarized key results with reference to study objective.
3. You have not explained the demographic characteristics of the patients and the correlation of this resistance with them.
Reviewer 2:
The prevalence of colonization with carbapenem-resistant Enterobacteriaceae, E. coli, Klebsiella and Enterobacter, and related risk factors in children
Method
If consent form signed by all patients, so what is the meaning of “anonymous and unverifiable patients”?
IBM SPSS v22 was not developed in Chicago. (Versions that were produced by SPSS Inc. before the IBM acquisition (Versions 18 and earlier) would be given an origin or publisher of SPSS Inc. in Chicago. Versions that were released after the acquisition would be given an origin or publisher of IBM Corp. in Armonk, NY.)
Result
What would be the advantages of reporting resistant to non-resistant ratio instead of percentage of resistance, which the latter is more familiar to audience? Please replace or add percentages.
In all tables report total number of samples, number of positive cultures and counts (frequencies).
Please report frequency of carbapenemase genes by microorganisms, preferably in a table.

Acknowledgment
Name of the research center is not correct. (Also check the text of manuscript.)

:Reviewer Responses

:Reviewer 1

.Please explain more about the underlying diseases that are mentioned as risk factors -1
Underlying diseases that were mentioned were as follows: malignancy, GI diseases, immunodeficiency, neurologic diseases such as cerebral palsy and epilepsy, endocrine diseases

.Summarized key results with reference to study objective -2
.Key results were mentioned in abstract and tables

You have not explained the demographic characteristics of the patients and the correlation of -3 ……this resistance with them
Total stool samples were 295, out of which 32% were taken from girls. Patient’s age distribution was 2-15 years. Correlation between gender and resistance was not analyzed because there wasn’t any difference between stool samples of two sexes in terms of colonized bacteria in the .literature

:Reviewer 2

If consent form signed by all patients, so what is the meaning of “anonymous and unverifiable -1
?”patients
.Some samples were transferred to lab with no ticket name, so they were excluded

:IBM SPSS v22 was not developed in Chicago -2
.It was corrected as SPSS v22

What would be the advantages of reporting resistant to non-resistant ratio instead of -3
percentage of resistance, which the latter is more familiar to audience? Please replace or add
.percentages
.Table of percentages was added

Prevalence of carbapenem resistance based on history of antibiotic consumption

Carbapenem resistance	Antibiotic consumption	Non-antibiotic consumption
susceptible	26%	37%
resistant	23%	14%

Prevalence of carbapenem resistance based on the underline disease

Underline disease	Susceptible	Resistant
yes	44%	29%
no	19%	8%

In all tables report total number of samples, number of positive cultures and counts -4
.(frequencies)
.Frequencies were mentioned in the above tables

.Please report frequency of carbapenemase genes by microorganisms, preferably in a table -5
.Frequency of resistant microorganisms were as fallows

E.coli	Klebsiela	Enrtobacter	Citrobacter
59.7%	23%	14.6%	2.7%

Distribution of carbapenemase genes in resistant strains

Gene	NDM-1	SPM-1	IMP	VIM	OXA-48
Frequency	3%	0	13%	13%	56%

.Name of the research center is not correct -6
.It was corrected

2 Revision 1

1 comment · 12 Mar 2023

Associate Editor

MINOR REVISION 12 Mar 2023

1. Please correct the name of the research center in the acknowledgment as follows:
Pediatric Infections Research Center, Research Institute for Children's Health, Shahid Beheshti University of Medical Sciences, Tehran, Iran.
2- Numbers plus percentages should be presented in all the tables. Some of the tables just present a few data points, such as the prevalence of 3 bacterial genera (Table 2), antibiotic consumption (Table 4), and types of resistance genes (Tables 7 and 8). To reduce the number of tables, authors could include the data in a descriptive sentence in the results or merge them into a single table.
3- Table 3 presented the association of underlying diseases with the (probably) carbapenem-resistance phenotype; however, no p-value is presented. Please add a column to show statistically the presence or absence of the association.
4- Except for point 2, please correct the following in your tables:
4-1. Table 3: "Underline disease" is incorrect.
4-2. Please revise the titles of Tables 5 and 6 if the word "resistance" refers to carbapenem resistance.
4-3. In Tables 5 and 6, the 95% CI for each row will not provide clear data about the roles of underlying diseases, hospitalization, or antibiotic therapy in colonization by carbapenem-resistant bacteria. Odds ratios should be calculated to show this difference.

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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.

:Editor 1
:Please correct the name of the research center in the acknowledgment as follows .1
Pediatric Infections Research Center, Research Institute for Children's Health, Shahid Beheshti
.University of Medical Sciences, Tehran, Iran
.Thanks, It was corrected

Numbers plus percentages should be presented in all the tables. Some of the tables just present -2
a few data like the prevalence of 3 bacterial genera (Table 2) and antibiotic consumption (Table
4), and types of resistance genes (Tables 7 and 8). To reduce the number of tables, authors could
.include the data to the results in a description line or merge them into a single table
.Table2 was omitted and bacterial genera were descripted-
.Table 4 and 3 were merged to table 5-
.Table 7 and 8 were omitted and data were mentioned in results-

Table 3 presented the association of underlying diseases with the (probably) carbapenem- -3
resistance phenotype; however, no p-value is presented. Please add a column to show the
.presence or absence of the association statistically
Thanks, but our study was descriptive, so we didn't analyzed the association and just reported -
.the percentages and ratios

Except for point 2, please correct the followings in your tables -4
.Table 3: Underline disease is incorrect .4-1
.It was corrected-

Please revise the title of Tables 5 and 6 if the resistance word refers to the carbapenem .4-2
.resistance
.It was corrected-

In Tables 5 and 6, 95% CI for each row will not provide clear data about roles of underlying .4-3
diseases, hospitalization, or antibiotic therapy on colonization of carbapenem resistant bacteria.
.Odds ration should be calculated to show this difference
As mentioned, our study was descriptive, so we didn't analyzed the association and just -
.reported the percentages and ratios

-

3 Revision 2

1 comment · 20 Mar 2023

Associate Editor

ACCEPT 20 Mar 2023

Dear Editor-in-Chief of APID,
The authors addressed most of the review comments.