

NCEH/ATSDR
Journal Toolkit

May 2014

Journal Toolkit

Are you getting ready to write an article based on your research? Check out the Journal Toolkit for clear advice on how to start writing and get your work published. You'll find tips for every step — like getting clearance, choosing the right journal, and responding to feedback.

Section 1: Get Concept Clearance for Your Article

p.1

Before you start writing, you may want to get concept clearance from your team lead or branch chief. Good preparation now can prevent problems and wasted time later.

Section 2: Find the Best Journal for Your Article

p.5

It might seem far off, but you need to think about which journal you want to submit to now. Use this tool to find a good match for your topic. Then you can keep the journal's requirements in mind when you're writing.

Section 3: Start Writing

p.6

Get advice on each stage of the process, from coming up with a title to writing the abstract.

Section 4: Respond to Feedback

p.20

Once your article is finished, you need to get feedback from reviewers. Learn how to make the most of your reviewer's suggestions — even if they're critical.

Tip Sheet: Use Clear Communication Principles

p.23

Check out these helpful tips to fine-tune your writing technique. They'll make your work clearer and more effective.

Section 1

Get Concept Clearance for Your Article

We recommend that you get concept clearance from your team lead before you start writing. This chapter will help you prepare. Planning ahead will save you time in the long run and make your article stronger.

What is the purpose of your article?

To get ready for concept clearance, explain the purpose of your article in one paragraph (4-6 sentences).

Sentence 1: What is the major purpose of this study? Be sure to emphasize what is new and useful in this introduction.

Example: This is the first study to observe tomato-handling practices in restaurants.

Insert sentence 1:

Describe the gap in literature that you are trying to fill with this article.

Use the findings from your literature review to support your statement.

Gap in literature:

Who needs to read your research findings? Define the audience.

Good: Pediatricians treating children age 6 and younger in Massachusetts who may have been exposed to lead.

Bad: The general public.

Who is your target audience?

Identify Your Priorities

Which of these key priorities does your article address? (Check all that apply.)

NCEH/ATSDR Priorities

- Reduce asthma morbidity and mortality
- Protect children from the health risks of harmful exposures and conditions
- Ensure safe drinking water
- Use innovative laboratory methods to detect, diagnose, and prevent environmental disease

CDC Priorities

- Improve health security at home and around the world
- Prevent the leading causes of illness, injury, disability, and death
- Strengthen public health and health care collaboration

CDC Winnable Battles

- Food safety
- Global immunization
- Health-care associated infections
- HIV in the United States
- Lymphatic filariasis in the Americas
- Motor vehicle injuries
- Nutrition, physical activity, and obesity
- Mother-to-child transmission of HIV and syphilis globally
- Teen pregnancy
- Tobacco

Briefly describe how you address these priorities in your article:

Once you've finished, share this worksheet with your team lead to get concept clearance. Set up a 30-minute meeting. See if your team lead has suggestions about refining your purpose, priorities, and audience before you start writing.

Next Steps

Use the Journal Match Tool in **Section 2** to help you find the best journal to publish your article in. The results will also link you to journal-specific requirements to help you plan for the writing stages.

Section 2

Find the Best Journal for Your Article

Now you need to think about where you want to publish your work. Having a specific journal in mind will help you focus your article as you write it.

Use the **Journal Match Tool** to find the best fit. Browse a comprehensive list of environmental health journals and filter them based on criteria like acceptance rate and impact factor. You'll also find links for each journal's submission requirements.

Next Steps

Now it's time to write. You can head directly to **Section 3** to start writing.

Section 3

Start Writing

Now that your team lead has given you clearance, it's time to write your article. Have the planning worksheet you completed in [Section 1](#) available for reference.

- ✓ **Write your abstract.**
- ✓ **Write the introduction.**
- ✓ **Get feedback on your abstract and introduction before writing other sections.**
- ✓ **Write the methods and results sections.**
- ✓ **Write the discussion section.**
- ✓ **Think of a direct and concise title for your article.**
- ✓ **Write your reference section.**

✓ Write your abstract.

An abstract highlights key information from your article. Journal editors will read your abstract first to decide if they're interested in considering the rest of your work. Writing a draft of your abstract now will help you plan out your article. Of course, you'll need to revise it later once you've finished writing. At that point, go back to make sure that your abstract only contains information that you've discussed in the text.

Paragraph 1: Purpose (3 to 5 sentences)

Referencing the introduction of your article, state the main purpose of your study.

Example: Previous research found that restaurant workers do not wash their hands or use gloves as often as they should. This study is the first to observe handwashing and glove use practices in restaurants directly. We wanted to find out what variables might affect how often workers wash their hands or use gloves.

Paragraph 2: Methods (3 to 5 sentences)

Referencing the methods section of your article, summarize the methods of your study.

Example: We collected data in restaurants chosen at random. We conducted interviews about food safety training. We also observed workers to gather information about handwashing practices.

Paragraph 3: Results (3 to 5 sentences)

Referencing the results section of your article, summarize the results of your study.

Example: We found that certain factors — such as working in a busy restaurant and having only one hand sink — contributed to lower rates of handwashing. Wearing gloves also contributed to lower rates of handwashing. Restaurants that had visible hand sinks and that gave staff food safety training were more likely to have workers who washed their hands often.

Paragraph 4: Conclusions (3 to 5 sentences)

Referencing the discussion section of your article, summarize the conclusions of your study.

Example: Updating food preparation practices would increase the odds that workers will wash their hands more regularly. Employees were most likely to wash their hands or use gloves before preparing food. Having an easily accessible sink was related to higher rates of handwashing. This suggests that having an easily accessible sink promotes handwashing. Similarly, having easily accessible gloves is connected to a higher rate of glove use.

This 4-paragraph format for writing your abstract is a good general approach. But be sure to follow your journal's specific guidelines when structuring your abstract.

✓ Write the introduction.

Your introduction will be about 4 short paragraphs. Use your planning worksheet from **Section 1** as the framework for your article.

Paragraph 1: Address the current gap(s) in literature (3 to 5 sentences)

Provide background on previous research and its limitations.

Use the findings from your literature review to identify the gaps.

Example: The FDA recommends handwashing and using barriers (like gloves) to stop the spread of germs to food. But research shows that restaurant workers do not wash their hands or use barriers as often as they should. To improve food safety, we need to know more about what factors affect a restaurant's food handling practices.

Paragraph 2: State the purpose of your article (4 to 6 sentences)

Use the sentences from your worksheet about the purpose of your article.

Be sure to emphasize what is new and useful about your work.

Paragraphs 3 and 4: Explain how your article fills the current gap(s) (3 to 5 sentences each)

Show how your article addresses the limitations of previous studies in a new, compelling way. You may want to include information about your methods or the results of your study.

Example: In our review of the research, we found no studies that directly surveyed employee handwashing practices in restaurants. To address this gap, we interviewed and watched food workers to collect data. This study is the first to look at how restaurant traits such as the number of meals served relate to food workers' handwashing and glove use.

✓ **Get feedback on your abstract and introduction before writing other sections.**

Ask a colleague or your team lead to review your abstract and introduction. Seeking feedback early will ensure you're on the right track.

To get the most useful feedback, ask specific questions like:

- Do my abstract and introduction clearly state the purpose of my study?
- Is it obvious how my study fills a current gap in literature?
- Are paragraphs short and do they explain only one idea per paragraph?

Once you receive feedback, remember to review it carefully and reread your abstract and introduction with the suggestions in mind. Integrate feedback and use it to guide your writing in other sections of your article.

Consider how feedback can strengthen your writing. Pay attention to specific words or sentences that confused readers and reword them.

✓ Write methods and results sections.

Once you have incorporated feedback in your introduction, write the rest of your article.

Describe your research methods in 3 to 4 paragraphs (3 to 5 sentences each).

Paragraph 1: Clearly define your steps

Explain how you collected, organized, and analyzed data. Write your steps in chronological order.

Limit your paragraphs to clear explanations of what you did. You will write about what you found (your results) later.

Example: We collected data in 321 restaurants chosen at random. State or local environmental health specialists collected the data. In each restaurant, we watched a food worker for about an hour and collected data on his or her handwashing and glove use. We also interviewed a manager or worker in each restaurant about traits linked to hand hygiene behavior, such as worker food safety training.

Paragraphs 2 to 4: Explain complex information and define all research variables

Explain original methods in detail. Focus on how you did your work, not what you found.

Example: We recorded variables that could affect proper hand washing such as:

- Whether the restaurant is busy
- If there is more than one hand sink
- If a hand sink is visible to workers
- If workers complete food-safety training

Describe your results in 3 to 4 paragraphs (3 to 5 sentences each) and use figures or charts to support your content.

Paragraph 1: Describe the results of your analysis

Limit your paragraphs to clear explanations of what you **found**.

Example: We found several factors that affect proper handwashing and glove use.

Handwashing was more likely to occur:

- Before food preparation than with other work activities
- When workers were not busy
- In restaurants where workers had food-safety training
- In restaurants with more than one hand sink
- In restaurants with a hand sink in view of the observed worker

Glove use was more likely to occur:

- During food preparation than during other work activities
- When workers were not busy
- In chain restaurants
- In restaurants with glove supplies in areas where workers prepare food

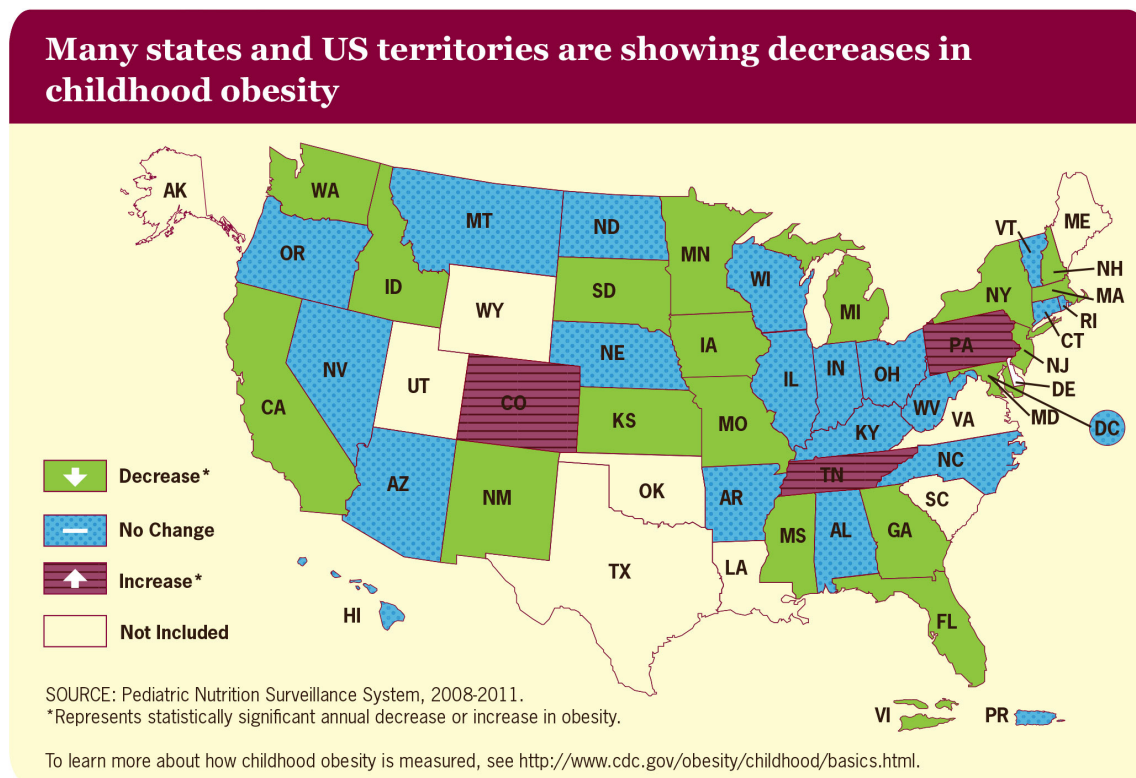
Paragraphs 2 to 4: Explain tables, charts, or figures

When explaining tables, charts, or figures keep sentences:

- Short
- Clear
- Descriptive

A reader needs to be able to understand what the table, chart, or figure shows based on the caption alone. Ask this question: What do you want the reader to walk away knowing? The answer is your caption.

Example:



✓ Write the discussion section.

Your discussion section is where you can state conclusions and address any limitations. Summarize your article and state conclusions in about 4 paragraphs (3 to 5 sentences each).

Paragraph 1: Restate your main result and explain your conclusion

Include information that supports your conclusion.

Example: Handwashing and glove use rates were highest before food preparation. This suggests that at least some workers may know that food needs to be protected from dirty hands. When sinks are nearby and clearly in view, workers seem more likely to wash their hands frequently. Workers also seem to be more likely to use gloves if they are easy to access.

Paragraph 2: Compare your study with existing, related studies

Highlight the strengths of your study, and emphasize what is **new and useful** about it.

Example: Our Food Worker Handwashing Practices study is the first to collect data through observation. Previous studies have relied on self-reported statistics about handwashing and glove use. They haven't been able to define variables affecting proper handwashing and glove use.

Paragraph 3: State any limits of or caveats about your study

Present limits factually and without apology.

Example: This study wasn't able to examine handwashing and glove use practices in different types of restaurants. We did not distinguish between fast food, family restaurants, or fine dining.

Paragraph 4: Make recommendations for next steps

Recommendations may include changes in policies or suggestions for future research.

Example: Restaurant managers and food safety programs should change food-preparation practices to lower the number of times workers need to wash their hands. For example, restaurants could change the process of making sandwiches to reduce the number of times a worker has to handle raw meat. Lowering the number of times workers have to wash their hands could make them more likely to comply. In future studies, researchers should examine other factors that affect hand hygiene and the link between glove use and handwashing.

✓ Think of a direct and concise title for your article.

Write a clear, engaging title that will entice readers. When titling your article, include your research topic, and 1 or 2 key pieces about your work, like:

- Methods
- Results
- Conclusions
- Study name

Example: Food Worker Handwashing Practices: An Observational Study.

Note: This title includes the topic and methods.

✓ Write your reference section.

Your reference section is an essential part of your article. A good reference section will help your readers better understand the context of your work. They'll see how your article builds on and adds to previous research.

To create an accurate, professional reference section:

- Make sure you use the correct format for your references. It may vary from journal to journal.
- Consider reference software that will make it easier to keep your references consistent.
- Proofread your references carefully. It's easy to miss typos and mistakes.
- Keep a detailed list of your references as you write. You'll save time at the end.

✓ Section 3 Recap

Here's a review of how to structure each section of your article, from abstract to references. Refer back to it as you write.

Abstract

Highlight key information from your article. Journal editors will read your abstract first to determine if they're interested in your full article.

Paragraph 1: Purpose (3 to 5 sentences)

Paragraph 2: Methods (2 to 5 sentences)

Paragraph 3: Results (3 to 5 sentences)

Paragraph 4: Conclusions (3 to 5 sentences)

Introduction

Use your planning worksheet from Section 1 as the framework for your introduction.

Paragraph 1: Address the current gap(s) in literature (3 to 5 sentences)

Paragraph 2: State the purpose of your article (4 to 6 sentences)

Paragraphs 3 and 4: Explain how your article fills the current gap(s) (3 to 5 sentences each)

Methods

Describe your research methods in 3 to 4 paragraphs (3 to 5 sentences each).

Paragraph 1: Clearly define your steps

Paragraphs 2 to 4: Explain complex information and define all research variables

Results

Describe your results in 3 to 4 paragraphs (3 to 5 sentences each) and use figures or charts to support your content.

Paragraph 1: Describe the results of your analysis

Paragraphs 2 to 4: Explain tables, charts, or figures

Discussion

Summarize your article and state conclusions in about 4 paragraphs (3 to 5 sentences each).

Paragraph 1: Restate your main result and explain your conclusion

Paragraph 2: Compare your study with existing, related studies

Paragraph 3: State any limits of or caveats about your study

Paragraph 4: Make recommendations for next steps

Title

Include your research topic and 1 or 2 key pieces about your work, like methods, results, conclusions, or study name.

References

Your reference section will help your reader understand the context of your work. Use the right format for your journal and proofread carefully for mistakes.

Next Steps

Now that you've finished your article, it's time to see what other readers think. Learn how to respond to feedback in the next section.

Section 4

Respond to Feedback

Getting feedback on something you wrote can sometimes be difficult and frustrating — even if the comments and suggestions could improve your work. In order to get the most out of the review process, use the tips on the following pages to help you choose the best way to respond to the feedback.

Some feedback will show you clear ways to improve your work. Some might be less helpful. You have to think carefully about which reviewer suggestions will really strengthen your article.

Your reviewer might suggest that you revise your text, do another literature review, or analyze your data further. Here are 4 ways to respond:

1. Make the change the reviewer recommends.

Pro: Insight from colleagues can add another view that strengthens your article.

Con: This may change the direction of your research. If you feel strongly, have a discussion with the reviewer.

2. Go back and analyze your data more.

Pro: A deeper analysis can strengthen your findings. Remember to make a connection between the data and the purpose of your article.

Con: Don't add data without a good reason. You could make your article confusing or undercut your argument. Ask yourself, "Would this new data support my thesis?" If it won't, don't add it.

3. Do a more in-depth literature review.

Pro: As your article develops, it can sometimes help to go back and review the literature. Expand your search. Ask colleagues for source recommendations.

Con: At this point, more research could really slow you down — and might not have a clear benefit. Instead, you might want to save further research for your next article.

4. Give a brief explanation about why you're not making a recommended change.

Pro: Discuss your point of view. This will help the reviewer understand your thought process.

Con: Depending on your relationship with the reviewer, she might think you're being difficult. If you're upset by the feedback, take time to calm down before you respond.

Bottom Line: It's easy to take it personally when someone comments on your work. Remind yourself that feedback can improve your article — and it will help prepare you for the peer review process.

Tip Sheet: Use Clear Communication Principles

Use these tips when you start writing your article.

Use active voice. Active voice makes statements clearer. In changing passive to active, you might need to add a subject.

Passive Voice

Several potential changes to industry practices that might reduce egg-associated salmonella infections were identified.

Active Voice

Researchers found several possible changes to industry practices that might reduce egg-associated salmonella infections.

Use short sentences that express only one idea per sentence. Shorter sentences are better for conveying complex information. They break up complex ideas into smaller pieces, which are easier to understand.

Before

In this multi-state survey of restaurants that prepare egg entrees during all hours of operation, high-risk egg-preparation practices such as improper cold storage of shell eggs before cooking, pooling of eggs, and improperly washing and sanitization of utensils were common.

After

We conducted a multi-state survey of restaurants that prepare egg dishes. We found that high-risk egg-preparation practices were common. They included improper storage of eggs before cooking, pooling of eggs, and improper cleaning of utensils.

Keep subjects and verbs close together. Structure sentences to start with the subject followed quickly by the verb. Keeping subjects and verbs close together makes it easier to follow the sentence.

Before

Participants in the study, after their initial evaluation and the completion of their blood work, will submit their symptom journals.

After

Study participants will turn in their symptom journals after their initial evaluation and blood work.

Tip Sheet: Use Clear Communication Principles

Write short paragraphs. Long paragraphs discourage readers. Even one sentence paragraphs are okay if they are clear and accurate.

Make sure your paragraphs have topic sentences. A topic sentence is the first sentence in a paragraph that explains what the rest of the paragraph is about. A topic sentence also keeps your document organized and clear for readers who skim for information.

Example: Researchers have linked eating fresh produce to outbreaks of foodborne illness.

Use transition words.

Transition words help bridge gaps between paragraphs. They tell your audience if a paragraph expands on or contrasts with the previous paragraph.

- Examples of transition words that show you're expanding on an idea are "**in addition to**" and "**for example.**"
- Examples of transition words that show you're contrasting with the last paragraph are "**however**" and "**on the other hand.**"

Acknowledgements

A special thanks to Paul Z. Siegel, MD, MPH whose scientific writing expertise was essential in shaping this toolkit. We also want to thank Traci E. Augustosky, PhD (ABD); Laura G. Brown, PhD; B. Rey de Castro, ScD; Ronnie Henry; Vince Radke, MPH, RS; Claudia L. Vousden, RN, MPH; and CommunicateHealth for their helpful contributions.