Arch Argent Pediatr. 2026;e202510924

Recommendations for oral presentation of scientific papers

Horacio Lejarraga[1]

ABSTRACT

The transmission of knowledge is a fundamental aspect of scientific work. In addition to being published, papers are presented at scientific meetings (conferences, etc.). Given the absence of dedicated content on this activity in most undergraduate and graduate curricula, this article offers recommendations for effective oral presentation, including preparation, the use of visual aids with presentation software, and the presentation of the paper. Recommendations are provided for the preliminary organization of the structure, the narrative sequence, the content organization, the calculation of presentation time, the use of legible, clear slides appropriate to the presentation time, and the audience address. All these recommendations can contribute to a better presentation, which is the purpose of this article.

Keywords: *dissemination of information; health communication; scientific communication and dissemination; conferences as a topic; medical education.*

doi: http://dx.doi.org/10.5546/aap.2025-10924.eng

To cite: Lejarraga H. Recommendations for oral presentation of scientific papers. *Arch Argent Pediatr.* 2026; e202510924. Online ahead of print 15-ENE-2026.

[1] *Faculty of Medicine, Universidad de Buenos Aires, Argentina.*

Correspondence to *Horacio Lejarraga: cursotesis07@gmail.com*

Funding*: None.*

Conflict of interest*: None.*

Received*: 10-17-2025*
Accepted*: 11-6-2025*

This is an open access article under the Creative Commons Attribution–Noncommercial–Noderivatives license 4.0 International. Attribution - Allows reusers to copy and distribute the material in any medium or format so long as attribution is given to the creator. Noncommercial – Only noncommercial uses of the work are permitted. Noderivatives - No derivatives or adaptations of the work are permitted.

INTRODUCTION

The Argentine Pediatric Congresses (CONARPE, by its Spanish acronym), organized by the Sociedad Argentina de Pediatría, including the recent 42nd congress in Mar del Plata, demonstrate that many young pediatricians participate in short oral presentations. However, many undergraduate and graduate curricula lack practical content on presenting scientific work and on the effective use of presentation software, which is used in almost all oral presentations.

The high quality of these presentations can help the audience better understand the presenter's intent. Science is a social activity and, as such, communication of knowledge is one of its pillars.[1] The scientific quality of the presenter is not necessarily linked to the skills of organizing and designing a presentation; these are two separate skills, the latter of which is almost artistic and literary. The most crucial formal property of scientific communication is clarity, followed by concision. That is why scientific journals always require these two conditions in manuscripts.

On this basis, we offer the following recommendations. These recommendations are based on decades of experience at scientific meetings and on reading various sources on the subject.[2-5] Some ideas are original; others (the majority) are taken from the bibliography cited.

In this article, we refer only to short presentations, typically in the form of free papers delivered by young professionals who must convey knowledge in a few minutes. However, some of these recommendations may apply to other types of presentations.

We would be grateful for readers' feedback on this text, as it is not intended to be a definitive statement but rather a set of recommendations from a pediatrician with academic experience.

PRELIMINARY ACTIONS

- Define the audience you will be addressing, and determine whether it is homogeneous in terms of profession (e.g., only pediatricians) or whether it includes people from various disciplines, whether they are students or experienced graduates, etc. The presentation format and language should be adapted to the audience.
- Find out the audience size. If there are only a few people, the presentation can have a conversational tone and allow for personal exchanges. Otherwise, the presentation should be more formal.
- Visit the classroom the day before to study where the presenter will be standing (or sitting), which hand will operate the pointer, and who will change the slides. Verify whether the speaker can see the projection on the main screen. If the presenter has their back to the screen, they will not be able to point out details in the graphics with the pointer. Pointers used to point at computer screens displaying images do not appear on the main screen.

PREPARING THE PRESENTATION

The title is significant. It should express the nature of the study as accurately as possible using as few words as possible. **Keep in mind that some professionals only read the title to see if it interests them**. It is essential to avoid vague or very general titles, such as "studies on asthma" or "prolonged diarrhea". These titles say nothing about the essence of the work. Furthermore, the more unspecific the title, the more general the topic is assumed to be. If you title it "bronchiolitis", it is assumed you will cover everything about it. We also do not think it is appropriate to write the title in the form of a question, for example: "*Should all early thelarche be treated?"* If the presenter is going to conclude that yes, they should all be treated, then the title expresses doubts that should not be disseminated; and if they should not all be treated, it is much clearer to title the presentation "*Indications for treatment of early thelarche"* or something similar.

In our view, it is best to avoid titles with words that are ambiguous or demeaning to patients. We have already analyzed this issue in another publication.[6] Words are not innocent; they are performative.[7,8]

Perhaps the most crucial feature of a presentation is clarity. In our opinion, the worst outcome in a presentation is for the audience not to understand the content.

When preparing a presentation, it is advisable to use the universal outline used in any scientific article:[9]

- Introduction (why was this topic studied or presented?)
- Methods (how was the work carried out, what methods were used?)
- Results (what new knowledge was found?)
- Discussion (what is the significance of the findings?)

On this basis, the main points of what is to be said should be defined. Naturally, all this

content must be condensed, as there is no time to elaborate in a 7-12 minute presentation. One way to synthesize a presentation is to begin with a version *without* slides, then determine which content to present *with* slides.

The sequence of ideas must be clearly organized. If you describe one topic and then move on to another, it is not advisable to return to the previous topic later, but rather to follow a precise sequence.

SLIDES IN PRESENTATION SOFTWARE

There is scientific literature that explores this topic in greater depth.[4] The most common errors are as follows:

- Confusing organization of the content to be presented.
- Use of too many slides in relation to the time allotted.
- Use of too much text on a single slide.
- Overuse of unnecessary images and graphics.
- Choice of poorly legible fonts.
- Use of poorly combined colors and contrasts. Slides are only an audiovisual aid used to present content that would otherwise be difficult to show; for example, numerical results that require a table, concentration curves, proportions, trends, growth curves, etc. On the other hand, if a concept requires explanation, it seems more appropriate for the presenter to do so orally, facing the audience.
- When preparing the slides, the author should first define the general structure of the presentation, considering the limited time available.
- It is crucial to eliminate irrelevant material to avoid cognitive overload, also known as information overload.[10] The content should convey only the essential information to be communicated, which should be consistent with what is being said. It is advisable to include only one main idea per slide, in a simple, "clean" form, i.e., without additional text that distracts from the main text.
- Try to avoid including irrelevant figures. It has been proven that learning is reduced in classes that contain irrelevant figures.[5] It is not advisable to overload the way something is expressed with words, as this overload can obscure the central concept.[8]
- Always use the same font and make the titles larger.
- Resist the temptation to include too much content. Avoid excess text; this is a widespread mistake. It isn't easy to read slides with more than seven lines while listening to the speaker.
- Slides should not compete with the speaker. If the speaker relies on the slides or uses them to remember what to say, the audience will focus on the slides and forget the speaker.
- Each slide should express a single idea. If the concept is complex, it is advisable to break it down into several subtopics to simplify the explanation.
- Each topic should be expressed in the form of a sentence, but if the sentence begins with a verb, then the rest should also start with a verb.
- Slide titles with the same hierarchical order should have the same font and size.
- Do not overuse fonts. This is a practice that is very easy to fall into, given the typographical facilities offered by current software.
- There must be sufficient contrast between the background and the text. Determine whether the classroom will be dark or very bright. If the classroom will be dark or dimly lit, use a dark background and light-colored text; if there is ample light, use a light background and dark text.
- Double-entry graphs, in addition to the title, should contain the meaning of the x and y axes. Graphs should include units of measurement; otherwise, the presenter should explain them.
- It is not necessary to use colors unless you want to highlight specific data.
- Check that the content can be read from the back rows of the auditorium.

Naegle[11] offers ten tips for a good presentation:

- Use only one minute per slide.
- Include only one idea per slide.
- Use slide titles to write the message you want to convey.
- Include only the essential concepts.
- If you include quotes, always place them consistently on all slides.
- Avoid cognitive overload.
- Use graphics effectively.
- Design slides that clearly convey the central concept.
- Practice what you are going to say orally for each slide presentation.
- Prevent technical disasters from occurring. We consider this final tip essential. In the past, we have seen organizers arrive in a classroom and find that they cannot locate the

plug adapter, that a cable is missing, that the projector is not working, or that a computer issue prevents the slides from being projected. These technical problems are less common today, but they can disrupt the presentation or delay it excessively.

PRESENTATION

The presentation should always be led by the presenter, who should look at the audience and establish a connection with them.

Some presentations lack a clear beginning and a strong ending. It can be much more reassuring for the presenter to have the first two opening sentences and the last two closing sentences prepared in advance. These sentences should be carefully worded because they have an impact and can (especially the last ones) remain etched in the listeners' memory.

The narrative must have a specific "tone." The presentation begins formally, with a neutral tone, but when presenting the results or the "conceptual core" of the work, the presenter can be somewhat more emphatic. In these cases, a few seconds of silence after stating a critical result has a greater effect than repeating it.

Presentation length

It is important to rehearse the presentation beforehand to gauge its duration and to practice the text. We recommend finishing one or two minutes before the allotted time, in addition to the time reserved for questions.

Other recommendations

- Calculate the presentation time. Using too many slides is a common mistake. This interferes with the presentation, forces the audience to read them too quickly, and prevents them from reading the text.
  Look at the audience from the outset; you can use a message to engage them.
- Manage the silences.
- Use body language.
- We reiterate the advisability of preparing one or two carefully crafted closing sentences to give the presentation an eloquent and meaningful ending.

CODA

We believe that with these guidelines, the presenter can perform satisfactorily and thus reach the scientific community more effectively.[12]

We wish you the best of luck!

REFERENCES

1. Day RA. Cómo escribir y publicar trabajos científicos. 3ra ed. Publicación Científica N° 598. Washington DC: OPS, 2005.
2. Barden RP. So you are going to present a scientific paper. *Radiology*. 1954;62(6):875-7. doi: 10.1148/62.6.875.
3. Flores-Hernández A F, Villamar-Chulín J. Elementos para el desarrollo de presentaciones académicas en PowerPoint. *Inv Ed Méd*. 2012;1(3):152-6.
4. Collins J. Education techniques for lifelong learning: making a powerpoint presentation. *Radiographics*. 2004;24(4):1177-83. doi: 10.1148/rg.244035180.
5. Bartsch RA, Cobern KM. Effectiveness of PowerPoint presentations in lectures. *Comput Educ*. 2003;41(1):77-86. doi: 10.1016/S0360-1315(03)00027-7.
6. Lejarraga H. Uso inconveniente en la práctica pediátrica de algunas palabras y frases. *Arch Argent Pediatr*. 2022;120(5):e242-5.
7. Lejarraga H. El lenguaje, eso que nos hace humanos. *Arch Argent Pediatr*. 2017;115(4):382-4. doi: 10.5546/aap.2017.382.
8. Borges JL. Indagación de la palabra. En: El idioma de los argentinos. Buenos Aires: Seix Barral. Biblioteca Breve. 1994.
9. Lejarraga H. La escritura de un artículo científico. *Arch Argent Pediatr*. 2001;99(3):273-80.
10. Parra-Medina L, Álvarez-Cervera F. Síndrome de la sobrecarga informativa: una revisión bibliográfica. *Rev Neurol*. 2021;73(12):421-8. doi: 10.33588/rn.7312.2021113.
11. Naegle KM. Ten simple rules for effective presentation slides. *PLoS Comput Biol*. 2021;17(12):e1009554. doi: 10.1371/journal.pcbi.1009554.
12. Serra ME. Gestión de un artículo científico. ¿Cómo llega lo que leemos a las revistas médicas? *Arch Argent Pediatr*. 2020;118(6):433-7. doi: 10.5546/aap.2020.433.