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The art of writing an abstract

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Conflict of interest:

Nothing to disclose





A quick poll: Vote by raising your hand!



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Questions

- ▶ Have you ever submitted an abstract for congress participation?
- ▶ Have you ever submitted an abstract for the EAHP congress?
- ▶ Was your abstract accepted?
- ▶ Do you want to leave the room straight away?

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Agenda for the workshop

1. Introduction and general principles
2. Discussion. Let's go to work! It's your turn!
3. The example of anti-infective drugs



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Definition of "abstract"

- ▶ Several definitions according to The Free Dictionary":
(<http://www.thefreedictionary.com/abstract>)

+

- ▶ A statement summarizing the important points of a text

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- ▶ Considered apart from concrete existence: an abstract concept
- ▶ Not applied or practical; theoretical
- ▶ Difficult to understand; abstruse: abstract philosophical problems

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Recipe of a good study



- ▶ Clear study question
 - Aims and objectives
 - „Small is beautiful“
- ▶ Protocol
- ▶ New message!
 - The literature should be well known
- ▶ Clear and valid methods

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Methodology

About the choice of particular methods to answer a research question

Methods

Description what was actually done



Smith FJ. Conducting your pharmacy practice research Project, PP Press 2010, 2nd ed



Quantitative

Goal: Quantification of phenomena

- Descriptive OR experimental

Examples

- Frequency of events
- RCT
- Before/after studies...

Examples of techniques

- Database analyses
- Patient chart analyses

Qualitative

Goal: Explore how? Why?

- Descriptive/exploratory/
hypothesis generating
- Exploration of processes,
patterns of people's thoughts,
behaviour,...
- Explanation of priorities,
concerns, meanings,...

Examples of techniques

- Focus group
- Interview



Smith FJ. Conducting your pharmacy practice research Project, PP Press 2010, 2nd ed



Recipe of a good abstract



- ▶ Concise piece of text
- ▶ Easy-to-read
- ▶ Requested structure
- ▶ Only major issues
- ▶ Target audience
- ▶ Target language

Your abstract = your
signature



Table 1: Categories for abstract submission with examples (<http://www.eahp.eu/congresses/abstract>)

CATEGORY	EXAMPLES OF TOPICS
Clinical pharmacy	Service evaluation, service implementation, outcome evaluation, pharmacoeconomics, drug efficacy evaluations, D&T committees
Drug distribution	Logistics, storage conditions, ordering systems, drug distribution technology (e.g., bar code scanning, electronic cabinets, dose dispensing), home delivery, supply chain management
Drug information and pharmacotherapy	Patient education, patient knowledge, telepharmacy, drug use evaluations, adverse drug events
Production and preparation	Technology, formulation, quality control
General Management	Education, staffing, organisation, financing, services/tasks, working environment, occupational health, management theories
Pharmacokinetics and pharmacodynamics	Therapeutic drug monitoring, metabolism, interactions, genetic polymorphisms
Patient safety and risk management	Medicines reconciliation, medication history, medication review, drug-related problems, root cause analysis
Other hospital pharmacy topics	Medical devices

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AMGROS



The storyline of an abstract

► Once upon a time researchers believed that ...

Background

► But then I thought that maybe ...

Objectives

► So what I did was...

Methods

► And I've discovered that ...

Results

► Which changed the way that we ...

Conclusion

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AMGROS



Basic structure and terminology

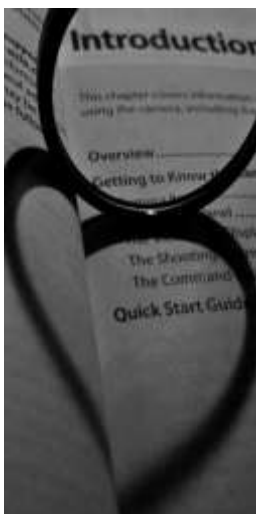


- ▶ **Title:** accurate, clear, concise, including as much about the context and the study aims as possible
–no abbreviations, unfamiliar acronyms
- ▶ **Contact data (authors):** only those who significantly contributed (e.g., design, practical work, data gathering, analysis, writing)

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Basic structure and terminology



- Background:**
 - ▶ Why did you start?
 - ▶ Current knowledge, state-of-the art, described concisely
- Purpose:**
 - ▶ Study aim – What did you investigate?
- Material and methods:**
 - ▶ Concise description of the design and the context/setting of the study, types of patients, description of the intervention(s)
 - ▶ Not too much, not too little information

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Basic structure and terminology



Results:

- ▶ What did you find?
- ▶ Main results, not just in subjective terms, but also underpinned with real data
- ▶ Most important data, findings on which the conclusion is based (!!)
- ▶ Avoid tables and figures

Conclusions:

- ▶ What does it mean? Why do you think your findings are important?
- ▶ Reasonable and supportive (by findings) conclusions only
- ▶ Avoid generalisations

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Checklist prior to submission

- ☒ Abstract adheres to EAHP guidelines
- ☒ My results are in line with study objectives'
- ☒ My conclusions are supported by data presented in the abstract'
- ☒ Word count: 300 max.
- ☒ Language, grammar and spelling checked by peers

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Agenda for the discussion

- ▶ Example 1 of a rejected abstract
- ▶ **Group work**
 - Pimp the abstract to comply with the EAHP criteria for abstract content (Example 2 of rejected abstract)



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Example 1 I

- ▶ **Title**
 - The use of alternative lipid emulsions in pediatric parenteral nutrition
- ▶ **Background**
 - Lipid emulsions are an important part of pediatric parenteral nutrition, providing energy, fat soluble vitamins and they are a source of essential fatty acids. Soyabean oil emulsions have however been identified as one of the major causes of PN-associated cholestasis (PNAC) development, caused by peroxidation and free radical formation. Long-term PN is related to several complications as liver diseases, which might progress to cirrhosis and liver failure.

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Example 1 II

► Purpose

- Soyabean oil has been the standard lipid emulsion used in parenteral nutrition for many years without alternatives. The use of fish oil has been proposed as a possible alternative to soyabean oil, especially in treating and/or preventing PNAC. A newer lipid emulsion, based on fish oil, has been shown to reduce the risk of cholestasis but this practice isn't recommended because it could be detrimental to infants who have limited fat stores.



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Example 1 III

► Materials and methods

- Soyabean oil is composed of long chain triglycerides and contains > 60% polyunsaturated fatty acids, with an omega-6:omega-3 ratio of 5.5:1. An addition of fish oil instead provides a reduction of omega-6 fatty acids and a higher intake of omega-3 fatty acids, which possess potent immunomodulatory and anti-inflammatory properties. However, both omega-6 and omega-3 fatty acids have been shown to be essential for growth and development. Olive oil emulsions instead wouldn't provide sufficient omega-3 fatty acids.



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Example 1 IV

► Results

- Recent studies have suggested that fish oil might lead to faster reversal of cholestasis than soyabean oil, reporting a median time of 9.4 weeks to reversal of cholestasis vs. 44.1 weeks of a control group receiving soyabean oil (4.69 times faster). Evidence from controlled trials have shown that fish oil combined with other lipids could provide similar beneficial effects.

► Conclusions

- The use of multi-lipid emulsions is advised to prevent and/or treat PNAC, combining the beneficial aspects of different lipid emulsions as a safe and well tolerated vehicle.

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Example 1 V

► Potential improvements

- The title does not cohere with the data/conclusion of the study
- Background information is not limited to the background section
- The purpose is missing
- The materials and methods are not presented
- The type of study is unclear – literature review?
- The results do not represent findings related to the purpose and methods (not) presented
- The conclusion does not strictly address the (non existing) purpose
- Lack of clear explanation of abbreviations
- What does the reader gain from the abstract?

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Pimp the abstract I

- ▶ Pimp the abstract to comply with the EAHP criteria for abstract content
 - What is the story presented in the abstract?
 - What can be improved?
 - How can the text be improved?
- ***Suggest new sentences***
- ***Focus on structure – not too much on the facts presented***

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Pimp the abstract II

- ▶ **Title**
 - DEVELOPMENT AND IMPLEMENTATION OF A PHARMACOTHERAPEUTIC PROTOCOL IN PATIENTS SUBMITTED TO CAESAREAN
- ▶ **Background**
 - The medication errors are the most frequent cause of adverse events. To develop pharmacotherapeutic protocols are a useful tool in improving the quality and safety patient care.



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Pimp the abstract III

► Materials and methods

- Prospective study of use of carbetocin in patients submitted to caesarean during a period of seven months. An interdisciplinary team was created and a chronogram of work was described. A bibliographic search was performed using Medline. The updated scientific evidence was evaluated. Other information sources used: product information, clinical guidelines. The protocol was established. The adequacy of the carbetocin use to the established conditions at protocol were analyzed.

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Pimp the abstract IV

► Results

- Inclusion criteria, conditions of prescription and dispensing process were established. All carbetocin treatments were analyzed on the basis on information collected through the request form and the patient clinical records. 966 childbirths occurred. 164(17%) were performed by caesarean. In 9(5,5%) carbetocin was used. In all cases, request form was perfectly filled out, checking previously if every case met the protocol. All carbetocin treatments were accord with protocol.

► Conclusions

- The use of multi-lipid emulsions is advised to prevent and/or treat PNAC, combining the beneficial aspects of different lipid emulsions as a safe and well tolerated vehicle.

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Pimp the abstract V

► Conclusions

- The protocol of use of carbetocin in the hospital has been followed adequately according to the established guidelines. The use of this drug has been limited to patients in whom carbetocin treatment is the most efficient and safe option. Moreover, unnecessary risks and costs are avoided. The protocol let the hospital having a record and a follow-up of the patients, which makes possible the continuous assessment of the economic and clinical results. Results should be assessed for a minimum of one year in order to obtain more reliable data and to identify new opportunities of improvement.



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Pimp the abstract VI

► Potential improvements

- The title and purpose do not cohere with the conclusion of the study
- The background does not clearly describe the problem
- The purpose contains 2-3 aims
- The materials and methods do not clearly describe, which methods are used to address each of the aims
- The results contain inclusion criteria (should be in the methods section and related to the relevant aim)
- The results do not clearly indicate, which data are related to the relevant aims
- The conclusion does not address all aims
- The conclusion contains new information
- The conclusion is contradictory regarding the concluding statements and future research
- General: Grammar, spelling mistakes etc.

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**Thank you for your time &
attention**



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