EMWA Professional Development Programme

Data Presentation I

Workshop status: Foundation

Workshop leader: Dr. Barry Drees

Abstract

Objectives
At the end of the course participants should be able to:
- Compose a table or graph when given data in raw form or in paragraph style
- Recognise the basic parts of a table and a graph and identify the various types of tables and graphs
- Understand the functions of tables and graphs
- Identify the strengths and weaknesses in the design of a given table or graph and be able to modify it accordingly

Workshop content
The role of a medical writer is to be able to present data in the clearest and most understandable form possible. The best way to present and communicate with data, however, is not prose but rather using some form of graphical presentation. This course will challenge and stimulate the participants' ability to think clearly about the data they present and write about. Participants will learn about the basic tools of data presentation, tables and graphs, their types and components, and when - and when NOT - to use them. It will introduce the participants to the fundamental tools of data presentation, tables and graphs in all their myriad forms and uses. This course is an introduction to data presentation and should be taken before taking Data Presentation II: Advanced Data Presentation.

Participant profile
Medical writers and editors with 0 - 4 years of experience.

Pre-workshop assignment
2 hours

Post-workshop assignment
2 hours

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Workshop outline

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Participant profile

Medical writers and editors with 0 - 4 years of experience.

Time required to complete pre-workshop assignment:

2 hours

Time required to complete post-workshop assignment:

2 hours

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Pre-workshop assignment

Objectives
This exercise should test and stimulate your ability to think clearly about and work with data.

Assessment criteria
Assignments must include a data presentation for all 3 examples and a problem data presentation to be considered for EPDP credit.

Resources/material required
A brain and the 3 data presentation examples

Time required
Approximately 2 hours

Instructions
People unfamiliar with medical writing often think that it is little more than correcting grammar and a few spelling mistakes. One of the most important roles of a medical writer, however, is to be able to present data in the clearest and most understandable form possible. This is particularly important in Europe, where drug regulatory authorities, unlike the FDA, do not always want to analyze the data themselves but often prefer to depend more on the interpretation of the company. This is also a vital skill when writing for all scientific publications.

This assignment is intended to introduce you to and give you some practice with the basic principles of data presentation. Although this subject is occasionally discussed in books and articles, it is one for which there are few absolutes and which really requires a problem-solving approach and therefore can best be learned only by doing.

"I hear and I forget, I see and I remember, I do and I understand"

Confucius 451 BC

This exercise should test and stimulate your ability to think clearly about and work with data. This is, in my opinion, one of the most important roles of medical writing and does not require that you be a native English speaker or that you have an advanced scientific degree. Native English speakers prepared all the original examples given with doctoral degrees in a health-related field! The following pages contain several examples of data or information presented in tabular or graphical format. First decide how these data can best be presented, as a table, graph or simply as text, and then support your choice by presenting the data in that format. If you decide that a graph or table is most appropriate, you must also write the text you would include in the report describing the table or graph. I understand that some medical writers at pharmaceutical companies or contract research organizations may not normally edit data in this way and you may therefore lack the computer skills or tools for constructing adequate tables and graphs. If this is the case, simply make a sketch or describe in words how you would present the data.

As you look at each example and before you do any editing, please think about what the main message is that the data should convey to the reader (the infamous "take home point"!). On the other hand, you may find (as I often do) that the message of a table or graph only becomes clear after you begin to edit it. Either way, whatever the message is, it should guide your choice of format, be obvious from your chosen presentation and be clearly stated in your accompanying text.

I didn't make these examples up; all were presented to me not as drafts but as final versions for inclusion into reports of clinical trials. Although I have seen a large number of bad tables and graphs in my 7 years as a medical writer in the pharmaceutical industry, I have chosen these because they illustrate problems that one frequently encounters and for which everyone does not agree upon the solutions. Although I did choose one solution for a report I was working on, I want to stress that there may be more than one "right" answer and I have picked up several good ideas from previous participants.

When I give seminars on Medical Writing topics, people often say that my examples are clear but that they still have trouble with some tables and data that they encounter in their work. I usually reply, "So do I!". Nevertheless, in an attempt to address this problem, please also send with the homework a difficult table, graph or data list which you have seen or worked on and we will discuss (time permitting) possible approaches to presenting these data more effectively.

EXAMPLES

1) Distribution of age (years) at randomisation.
2) Observer assessment: degree of inflammation, 0.5 g and 1.0 g.
3) Duration of ovulatory suppression: progesterone levels < 10 nmol/L.

➔ Don't forget - Problem data presentation from your own experience.

Pre-workshop assignments must be returned to Barry Drees at the address below to obtain credit for the EPDP certificate. All assignments will be acknowledged with an email that they were received – if you do not receive such an email, contact the workshop leader.

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barry@trilogywriting.com

EXAMPLE 1

Distribution of age (years) at randomisation

	Treatment Regimen	
Age Group	**3.6 mg/4 Weeks**	**5.4 mg/6 Weeks**
<20	-	-
20 - <25	4	8
25 - <30	8	9
30 - <35	17	14
35 - <40	11	8
>=40	4	4
Total number of patients	**44**	**43**
Mean	32.3	31.2
SD	5.34	6.32
Range	21 - 42	21 - 45

Example 2

OBSERVER ASSESSMENT: DEGREE OF INFLAMMATION: DOSE 0.5g

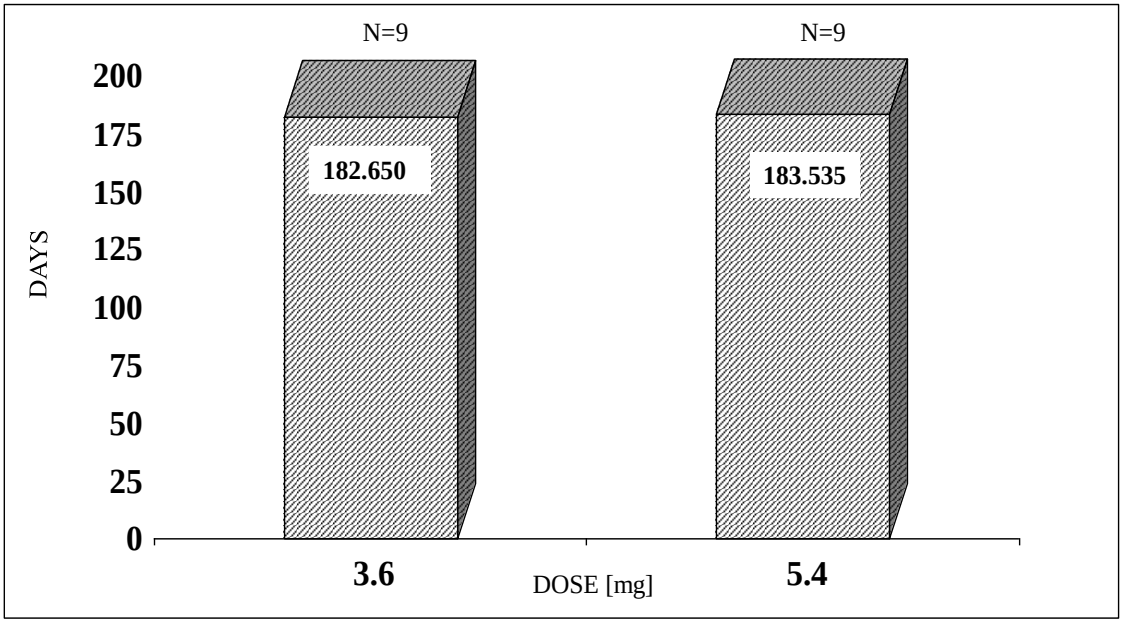
Subject Number	0h		30 min.		45 min.		2h		4h		6h		8h		24h	
	(L)	(R)	(L)	(R)	(L)	(R)	(L)	(R)	(L)	(R)	(L)	(R)	(L)	(R)	(L)	(R)
I	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
II	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
III	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
IV	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
V	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
VI	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0
VII	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
VIII	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0
IX	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
X	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
XI	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
XII	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
XIII	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
XIV	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
XV	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
XVI	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
XVII	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
XVIII	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

0: none; 1: mild; L: left buttock; R: right buttock

OBSERVER ASSESSMENT: DEGREE OF INFLAMMATION: DOSE 1g

Subject Number	0h		30 min.		45 min.		2h		4h		6h		8h		24h	
	(L)	(R)	(L)	(R)	(L)	(R)	(L)	(R)	(L)	(R)	(L)	(R)	(L)	(R)	(L)	(R)
I	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
II	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
III	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
IV	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
V	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
VI	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
VII	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
VIII	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
IX	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
X	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
XI	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
XII	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
XIII	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
XIV	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
XV	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
XVI	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
XVII	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
XVIII	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Example 3

Duration of ovulatory suppression: progesterone levels < 10 nmol/l

MEDIAN VALUES