PharmaSUG 2015 - Paper CP07

Clinical knowledge helps SAS programmers in the pharmaceutical industry get job done better

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ABSTRACT

SAS programming in the pharmaceutical industry is not a pure programming job like that in the IT industry. It requires more understanding and knowledge on the business side, i.e. the complicated nature of clinical trial and clinical trial data. In this sense, Clinical Trial Data Analyst is a better title reflecting the nature of the job.

For SAS programmers in the Pharmaceutical industry, it will give them a unique perspective of view if they have thorough understanding of clinical trials and sufficient knowledge of the disease related to a given drug in clinical trial(s). This unique view helps bring a quicker grasp and deeper understanding of the clinical data, and it also may empower SAS programmers catch and solve hidden issues that usually won't be seen in others' eyes.

In this paper, the author will provide examples that clinical knowledge helps SAS programmers in the pharmaceutical industry get job done better. Hopefully it will inspire more colleagues in the pharmaceutical SAS programming field to enhance their clinical knowledge and understanding which may result in high quality of product delivered and faster personal career growth.

INTRODUCTION

The introduction explains the purpose and scope of your paper and provides readers with any general information they need to understand your paper.

This is the paper body. This is the paper body.

FIRST MAIN TOPIC < HEADING 1>

This is a main topic in the body of the paper. This is the paper body. This is the paper body.

If you need to include source code:

```
data one;
set two;
if mix(var1, var2) > 0 then do;
```

Continuation of paper body—after source code. This is the paper body. This is the paper body.

Figure 1 Ошибка! Источник ссылки не найден. is a sample figure.

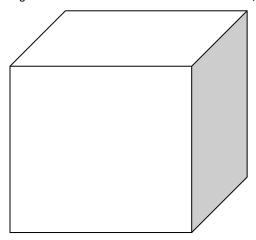


Figure 1. Caption for Sample Figure

Use captions for figures.

SUBHEAD A LEVEL<HEADING 2>

This heading level is for a subtopic of amain topic. This is the paper body. This is the paper body.

Table 1 is a sample table:

SAS Variable Format	DB2 Data Type
\$w.	CHARACTER
\$CHARw.	
any date format	DATE

Table 1. DBLOAD Procedure: Default DB2 Data Types for SAS Variable Formats

Use captions for tables.

SECOND MAIN TOPIC < HEADING 1>

This is a main topic in the paper body. This is the paper body.

If you need to include a numbered or an ordered list:

- 1. This is a sample numbered or ordered list item. This is list item text. This is list item text.
- 2. This is a sample numbered or ordered list item. This is list item text.

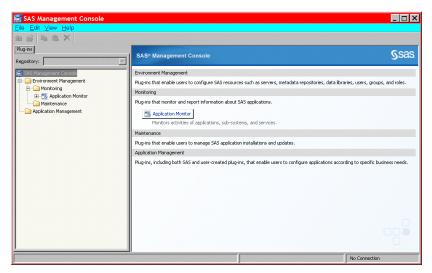
This is the paper body. This is another sample paragraph. This is another sample paragraph.

If you need to include a bulleted or an unordered list:

- This is a sample bulleted list item. This is list item text. This is list item text.
- This is a sample bulleted list item. This is list item text.

Continuation of paper body—after an unordered list. This is the paper body. This is the paper body. This is the paper body. This is the paper body.

Display 1 is an example of a display or screen capture.



Display 1. Former Main Interface for SAS Management Console

Use captions for displays.

SUBHEAD A LEVEL<HEADING 2>

This is subtopic for the above. This is the paper body. This is the paper body.

If you need to include SAS output, this is an example of how to present it:

Output 1 shows an example of how to present output.

```
CREATE TABLE ALLACCTX(SourceSystem varchar(4), cctnum numeric(18,5) CONSTRAINT "ALLACCT_PK" PRIMARY KEY, ccttype numeric(18,5), balance numeric(18,5), clientid numeric(18,5), losedate date, opendate date, primary cd numeric(18,5), status varchar(1))
```

Output 1. Output from a CREATE TABLE Statement

Use captions for output. Note that output is the same font as source code, but it is in a box. (Not a Text box.)

Continuation of paper body—after output.

SUBHEAD A LEVEL<HEADING 2>

This is the paper body. This is the paper body.

SubheadB Level<Heading3>

This heading level is for a subtopic of a secondary topic. This is the paper body. This is the paper body.

Subhead C Level<Heading 4>

This is the paper body. This is the paper body.

CONCLUSION < HEADING 1>

The conclusion summarizes your paper and ties together any loose ends. You can use the conclusion to make any final points such as recommendations, predictions, or judgments.

This is the text for the paper's conclusion. This is the paper body. This is the paper body.

REFERENCES

Karkera, Gayatri, Mohan, Neha. 2013. SAS® PROGRAMMER TO CLINICAL SAS PROGRAMMER. *Proceedings of the PharmaSUG 2013 Conference*. Available at

http://www.pharmasug.org/proceedings/2013/IB/PharmaSUG-2013-IB10.pdf

Truong, Sy. Clinical Trials Terminology for SAS Programmers. *Tutorials of the PharmaSUG* 2004 *Conference*. Available at

http://www.lexjansen.com/pharmasug/2004/Tutorials/TU03.pdf

Shostak, Jack. 2005. SAS® programming in the pharmaceutical industry. Cary, NC: SAS Institute Inc.

Lafler, Kirk P., Shipp, Charles E.. 2008. What's Hot, What's Not - Skills for SAS® Professionals. *Proceedings of the SAS Global Forum 2011 Conference*. Available at

http://support.sas.com/resources/papers/proceedings11/191-2011.pdf

Minjoe, Sandra, Widel, Mario. 2011. Success As a Pharmaceutical Statistical Programmer. 2011. *Proceedings of the PharmaSUG 2011 Conference*. Available at

http://www.lexjansen.com/pharmasug/2011/ib/pharmasug-2011-ib01.pdf

Wang, Ming. 1996. THE ROLE OF SAS PROGRAMMERS IN CLINICAL TRIAL DATA ANALYSIS. 1996. *Proceedings of the Northeast SAS Users Group Conference*. Available at http://www.lexjansen.com/nesug/nesug/96/NESUG96061.pdf

Carey, Smoak. 2009. Empowering SAS® Programmers: The Role of the Manager. *Proceedings of the PharmaSUG 2009 Conference*. Available at

http://www.lexjansen.com/pharmasug/2009/ma/ma03.pdf

Joanna, Koft. 2006. How to Grow a SAS® Programmer. *Proceedings of the SAS Users Group International 31th Conference*. Available at

http://www2.sas.com/proceedings/sugi31/119-31.pdf

Shilling, Brian C., Matthews, Carol. 2004. SAS® Programming for the Pharmaceutical Industry. *Proceedings of the Western Users of SAS Software 2004 Conference*. Available at http://www.lexjansen.com/wuss/2004/sas-solutions/i_ss-sas-programming-for-the.pdf

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