Help Your Fellow Colleagues: Customized SAS Graphs could Provide Peek into Subjects’ Progress

**Theme**
Programmers can use the basic and yet highly customizable SAS/GRAF tools and controls to create informative graphs that create profile of a subject in a clinical trial for the benefit of clinicians, statisticians, etc.

**Reports Requested**
- During the course of a trial
  - A subject’s exposure to the drug
  - Reported pain scores
  - Reported AEs with severity & intensity
  - Demographic information
  - Other endpoints’ progression
  - Select vitals parameters

**Results**
- Extensive use of coordinate system to display various graphics on the output area available.
- A few global macro variables provide control for length and height of various graphical panels.
- %LABEL macro proved highly instrumental in annotating the graphs.
- Challenging to determine the length and height of each panel due to insufficient SAS warning/error messages.

**Advantages**
- Informative at subject-level
- Quick to adapt varied needs
- No additional training of the requestors is required as SAS programmers remain the main drivers.

**CODE SNIPPET**
```
*following macro can be used to place a text*
* (titles/ subtitles ) anywhere on the page*
%MACRO TITLETXT(TXT=,%XN=0,YIN=6.3);
DATA TLANN0 ;
LENGTH TEXT 5200;
%*INITIALIZES ANNOTATION VARIABLES;
%DCLANNO;
%*SET THE COORDINATE SYSTEM;
%*SYSTEM(3,3,3);
%*TEXT AT THE 2% OF GRAPHIC AREA(XY);
%LABEL(0.0,%*TEXT, BLACK,0.0.B5, &h=3);
RUN;
%*XY position for plotting;
GOPTIONS HORIZIN=6.YIN. VORIGIN=6.YIN. ;
%* plot the graph;
PROC GANNO ANNOTATE=TLANN0_DATASYS;
RUN;
%MEND TITLETXT;
```

**Next Steps**
- New SAS graphics procedures have supposedly many features including more pleasing graphics output. It would be interesting to compare if the level of control available is similar to the earlier graphical procedures.
- The program currently takes considerable amount of time to draw up the profiles of many subjects. There might be ways to reduce the processing time, e.g. by using quicker graphics options or modifying the program flow, etc.

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