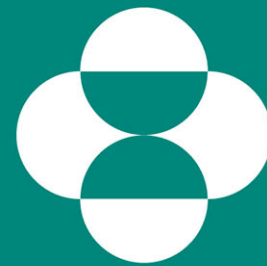


FRAMEWORK FOR DEVELOPING AND MAINTAINING A MACRO LIBRARY IN HEALTH TECHNOLOGY ASSESSMENT

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Biostatistics and Research Decision Sciences, MSD



MSD

INVENTING FOR LIFE

PhUSE SDE @ MSD – Brussels

Sep 21st 2018

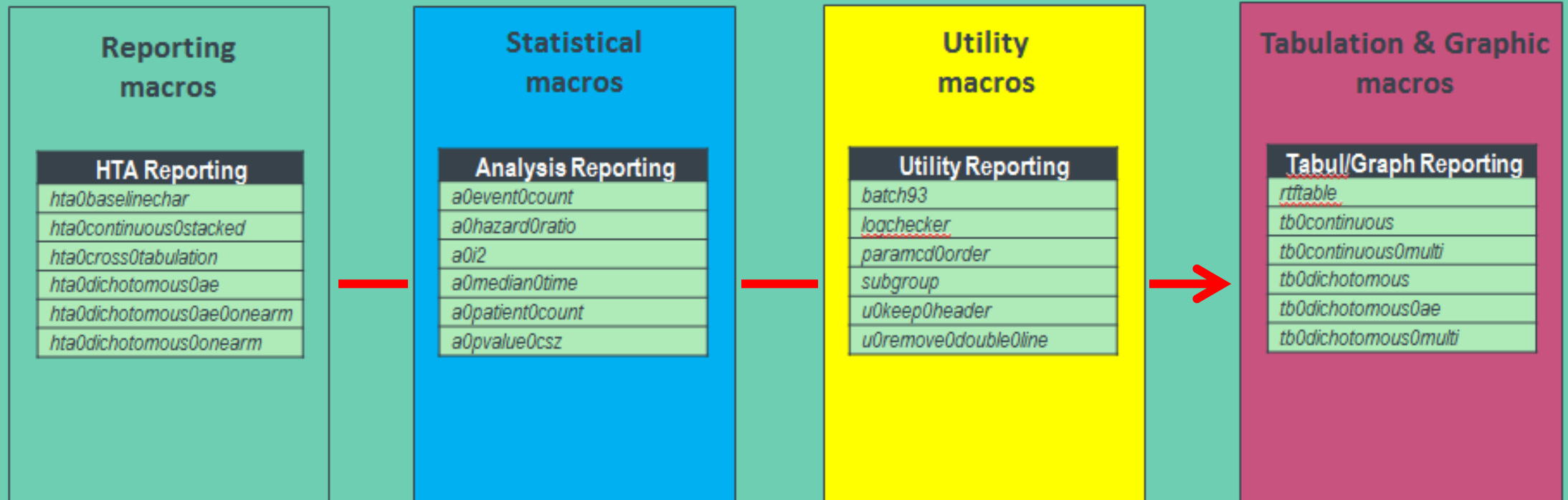
Introduction

- ❖ Standard tables and analysis have been defined in collaboration with our MSD subsidiaries for HTA submissions.
 - ➔ To provide these standards through different projects in an efficient and timely manner, a validated, documented and compliant HTA Macro Library was mandatory.

- ❖ The scope of this macro library is
 - ❖ Reducing the programming time thanks to the re-use of code.
 - ❖ Improving the team flexibility allowing the resources allocation from any programming team.
 - ❖ Ensuring consistency, reproducibility, efficiency and compliance.

The HTA Macro Library has several assets...

- ❖ One of them is definitely its **modularity**



A real guidance, documentation & monitoring around HTAML...

HTA ML Steering Committee



SOP



Dvlp&Validation
Guidance



validation



priorversion



documentation



sample



HTAML
Tracker



HTAML
Overview Status



HTAML
Pending Tasks



THANK YOU

Please come and see our Poster.
Let's share our experience!

Framework for Developing and Maintaining a Macro Library in Health Technology Assessment

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Introduction

The MSD Health Technology Assessment Macro Library (MSD HTA ML) is an ongoing initiative started by the Bios statistics and Research Decision Sciences (BARDIS) HTA team. Its main objective is to satisfy the numerous needs for a compliant repository of SAS® macros to provide standardized deliverables across protocols and therapeutic areas. The macros are designed, developed, validated and documented using efficient programming techniques for developing SAS macros.

The library provides detailed standard specifications, sample code package and validation documentation for the version-controlled macros, which follow intuitive directory structure. The standard macro structure is modular. Different types of macros are available (e.g. analysis, tabulation, graphic, utility) and can be invoked in the same single macro call to produce a set of Tables, Listings, Figures (TLFs) and/or datasets.

The code library has a wide range of Analysis and Reporting (A&R) macros across various levels of program development lifecycle. It can include programs written in multiple languages e.g. R, SAS®.

Highlights

H1. Macros developed by end-users in collaboration with stakeholders.

H2. Portability of the library structure



H3. Modularity of the macro programs



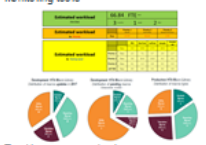
H4. Flexibility of the macro outputs

Benefits

B1. Consistent and reproducible outputs
B2. Macros accessible from a central team space location
B3. Standardized outputs
B4. Three levels of macro validation
B5. Version and access controlled macro programs

Maintenance & Updates

M1. Monitoring tools



M2. Tracking summary sheet
M3. Enhancements list
M4. Periodic updates to the macro library
- add new macros
- update existing macros

Recommendations

R1. Clear and concise documentation
R2. Selective parameterizing
R3. Organized updates to the macros
R4. Maximum involvement of the HTA team – statistical programmers and statisticians
R5. Code developed and shared across projects
R6. SMEs for the developed macros
R7. Tools to communicate macro library updates

References

1. Redner Ginger, Zhang Lijiang, Heremans Carl (2007). The HTA ML: A Framework for Developing Quality SAS® Macros. Proceedings of the 2007 Pharmaceutical SAS® Users Group Conference, Paper TTT10.

2. Snow Fu, James Wu (2004). Organizing and Building a Centralized SAS® Macro Library. Proceedings of the 2004 Pharmaceutical SAS® Users Group Conference, Paper AD11.

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