

QIBA fMRI Reproducibility Work Group Call

Tuesday, May 15, 2012 at 11 AM CT

Call Summary

Participants

James Voyvodic, PhD (Chair)
Paul Carson, PhD
Barbara Croft, MD
Feroze Mohamed, PhD
Jeffrey Petrella, MD
Jay Pillai, MD

Laura Rigolo, MS
David Soltysik, PhD
Domenico Zaca, PhD

RSNA

Joe Koudelik

Profile Development Details

- Group consensus is that reproducibility for fMRI can be improved
- More consideration needed as to how reproducibility fits into the current fMRI Tech Cmte activities moving forward, i.e., how reproducibility insight fits within the fMRI Profile needs clarification
- Current focus of Profile is on “typical” fMRI workflow; integration with reproducibility not understood
- Need standardization based on current common practices in the field
- Sources of variance remain primary interest, eventually leading back to reproducibility and possible error
- Parameters affecting accuracy and reproducibility need to be addressed in the Profile
- Results of Dr Voyvodic’s reproducibility study to be added to the Profile addressing data acquisition and image analysis
- Sources of controllable and non-controllable variance need to be teased apart and addressed in the Profile
- Limited supporting data exists, so performance levels of acceptable/target/ideal may be difficult to provide; removal of this detail level to streamline Profile development was discussed
- Need to support a range of specified tasks with expert consensus, personal experience, or published literature
- Need to flag profile “steps” that compliance levels make sense
- Standardization details to list best ideas to achieve the Claim, i.e., acceptable by convention
- Normalization of signal thresholding needs to be built into the Profile
- Dr Voyvodic pursuing a NIH RO1 grant as an extension of his QIBA/NIBIB project
- Reminder:
 - Claim=What is possible
 - Profile=Steps needed to make fMRI reproducible; Profile needs to reflect the Claim based on reproducibility

Next steps

- Dr Voyvodic to email Dr Mohamed a list of data needs still required to fill Profile knowledge gaps
- Dr Mohamed to flag Profile “standardization areas” and email to the group for feedback
- Profile development will continue at the QIBA meeting in Chicago on May 22-23

Next call: *Tuesday, June 12, 2012 at 11 am CT*

Note: *Some of the items described in this summary have since changed after the QIBA annual meeting.*