

## 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.*