

QIBA fMRI Technical Committee Update

Wednesday, June 6, 2012 at 11 AM CT

Call Summary

In attendance

Jeffrey Petrella, MD (Co-Chair)

Paul L. Carson, PhD

Barbara Croft, MD

Andrew J. Kalnin, MD

Feroze Mohamed, PhD

James Reuss, PhD

David Soltysik, PhD

Daniel Sullivan, MD

James Voyvodic, PhD

Domenico Zaca, PhD

RSNA

Joe Koudelik

Julie Lisecki

QIBA fMRI Technical Committee Call Agenda, June 6, 2012

1. QIBA Annual Meeting summary
2. Updates regarding funded projects – Dr. Pillai to present results during next reproducibility meeting, June 12.
3. Workflow Matrix/Polling

Discuss current poll and next steps for distribution to ASFNR membership via SurveyMonkey
ASNR distribution as well?

Leading questions if submitted to ASNR at large (Dan Barboriak/Jeff Petrella)

1. You can modify the first question to:

Are you currently performing clinical brain mapping at your facility?

1 Yes

2 No

3 No, but we are planning to in the next year

4 don't know

2. If you are not currently doing fMRI in your practice, what do you consider the major barrier?

1 no demand from clinicians

2 lack proper equipment

3 no technologist/physicist with training

4 no radiologists with training

5 don't know

4. Digital Reference Object – next steps?

5. Profile Development – next section for discussion – edited up to 3.2.7?
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Discussion

1. QIBA fMRI Polling (Dr Reuss)

- Single required question currently exists on survey is *“Would you be willing to contribute to a detailed description of fMRI in the clinical workflow?”*
 - Consideration will be given to adding a question on implementation of field testing
- A slightly revised version of the survey is also being considered for dissemination by ASNR, *in addition to ASFNR*
 - Dr. Reuss will compile any additional edits and send them to RSNA survey dept staff
 - Dr. Petrella had two specially targeted questions for ASNR (as referenced in the agenda above), and there were some other suggestions discussed
- Deemed helpful was to note which sites are *not* using fMRI for informational purposes
- Additional suggestions included:
 1. State approximate time required to complete the survey (about 5 minutes), and also how many pages there are at the beginning of the poll (to help gauge effort)
 2. Indicate that questions are primarily multiple choice and quick to answer
 3. Allow for a jump to “end” option if respondents can only complete questions 1 and 2.
 4. Make question #1 a required question
 5. Add a “next” and “finish” option to every page, in case some people do not want to complete the whole survey

6. Introductory paragraph at the beginning of the survey will introduce survey
7. Epilogue “about QIBA” paragraph will be at the end of the survey
8. Survey to ASFNR will probably receive the most responses due to more targeted group
9. Survey to ASNR will need to tailor introductory paragraph – ASFNR could be considered a more specific clinical subset of larger ASNR membership
 - A survey to ASNR might require some additional information, such as, “What is fMRI and how and why is it used?”
 - A statement such as, “If you’ve taken this survey already; thank you, and please disregard.”
 - May be possible for ASNR to de-dupe its mailing list with regard to members who are both ASNR and ASFNR participants

2. Datasets and Digital Reference Objects (DROs)

- Comment was made that real human datasets would be nice to use for field testing with DROs
 - Generate realistic brain activity patterns, filter out task components, put these together, and use them to test approaches to extracting the signal from DRO
- FDG-PET and DCE-MRI Tech Cttes utilize completely synthetic datasets that were generated specifically to look as realistic as possible, in regard to noise properties and images
 - Dr. Barboriak designed the DRO and datasets for DCE-MRI; he would be an excellent resource
 - Consider inviting Dr. Barboriak to be a guest speaker for future fMRI Tech Ctte Mtg

3. Update on Profile Development (Dr. Mohamed)

- Identified sections needing work were reviewed line-by-line at the recent QIBA face-to-face meeting in May
- The group determined to develop a Profile as well as a protocol, particularly in relation to Item #2.8
 - Dr. Dorfman collaborated with the group and helped to foster a better understanding of the differences between these two documents
 - The Profile is considered more of a technical / engineering document in how to achieve the claims, whereas the protocol provides standardized steps to actually perform fMRI via detailed instructions
 - If an item does not support a claim, it does not belong in the Profile and will be removed, whereas almost *everything* will be detailed in the protocol
 - The Profile also identifies where knowledge gaps exist.
 - Dr. Mohamed is working on editing the current Profile document

Next Steps:

1. Dr. Mohamed working on updating the Profile based on discussion at the QIBA May f2f meeting
2. Dr. Reuss to compile any additional survey edits and introductory wording for 1) ASFNR survey, and 2) ASNR survey, if agreed that both groups will receive

Next Meetings

- QIBA fMRI Reproducibility WG, **Tuesday, June 12th at 11 am CT**
- QIBA fMRI Technical Committee, **Wednesday, June 20th at 11 am CT**