**Rigor and Reproducibility at the Lane Neuroimaging Lab**

The following steps are being taken at the Lane Neuroimaging Lab in order to assure scientific rigor and reproducibility.

Quality Assurance (QA)

* Quality Assurance (QA) scans of a phantom (gel filled sphere) are performed on a weekly basis across all of the radio-frequency (RF) coils used in research MRI scans.
* Quarterly maintenance of the MRI scanner is performed by the manufacturer, General Electric (GE).
* Annual quality testing and calibration of the MRI scanner are performed according to the American College of Radiology (ACR) guidelines.

Operation of the MRI scanner

* The MRI scanner for all research scans is operated by a trained MRI technologist
* Protocols for each MRI study are saved on the MRI scanner. This facilitates running the same set of data acquisition sequences, in the same order, for all subjects within each study.
* MRI technologists have a hard-copy of the protocol for each study with additional notes that is used as a guide during the MRI scanning session.

Training and Education

* New scanner technologists are trained by current/former scanner technologist, lab manager Ginny Hayes, and MRI physicist Rasmus Birn.
* Research teams are trained at the beginning of each study by the MRI techs and lab managers. This training includes how to correctly complete the MRI Safety Documents and how to comply and interpret the Day of Scan Form. These Forms are all created and reviewed by UW Radiology and the UW MRI Safety Committee. The techs also train Research Labs in how to complete MRI Emergency Procedures.

Documentation

* Information about every MRI scan is recorded in a log book. This information includes the date, exam number, study ID, PI name, the number of series in the scan, whether a Radiology overread was requested, and the number of backup discs used. This log book is stored in a locked cabinet in the MRI control room.
* MRI scanning parameters are stored in the header of each DICOM image