Data Management Plan (p. 1 of 2)

The proposed project will include human subjects data consisting of background demographic information and a variety of data related to gait and balance, and it will be conducted at the University of Utah. The University of Utah will be the primary caretaker of the data, and will own and manage the data.

Description of the data

For each objective listed below, demographic data (including age, gender, height, weight, and shoe size) is needed for published reports to convey the characteristics of the subject population. The demographic data will be recorded electronically. All experimental data from objectives will be recorded via computerized data acquisition software, with additional information recorded in a laboratory notebook. Details for each objective are as follows:

Objective 1. Gait and balance data will be collected simultaneously in a motion lab (including motion capture plus forces from either an instrumented treadmill or force plates) and by the SMARTER system.

Objective 2. Gait and balance data will be collected by the proposed SMARTER system in a simulated home environemnt. Video data will be collected as well.

Objective 3. Gait and balance data will be collected by the proposed SMARTER system in the home.

Context of the Data

Objective 1. The gait and balance data collected simultaneously by the motion lab and the SMARTER system will be used to validate the SMARTER measurements. Several different conditions will be explored in order to determine the sensitivity to change of both the SMARTER system as well as the clinical tests in the motion lab.

Objective 2. The gait and balance data collected simultaneously by the SMARTER and the videos will be used to validate the ability of the SMARTER to identify activities relevant to gait and balance.

Objective 3. The gait and balance data collected by the SMARTER in the home and community environments will be used to investigate the ability of the SMARTER to evaluate gait and balance outside of the confines of the clinic and motion lab.

Nature of the Data

The measured data will be computer files generally in the form of ascii tab-delimited text files with header information. The essential metadata (e.g. demographic information, type of activity / measurement, as recorded in the laboratory notebooks) will be included as a header in the relevant electronic files. Video data will also be collected and will also be made available as possible within IRB guidelines dependent upon the ability to deidentify the subjects (see below).

Data Preservation and Access

The data to be acquired in the proposed project will include human subjects data that require Institutional Review Board approval. All rules and regulations related to privacy (i.e., HIPPA) will be observed with specific regard to collected data.

To preserve confidentiality, each subject will be assigned an arbitrary code that will be associated with the data, and only data stripped of all potential identifiers will be stored in the collected and curated data sets. A hard copy in containing the links to the subject names will be stored in a locked area of the PI's office, and one file that contains the links to subject names and identifiers will be kept in a password-controlled file accessible only to the PI. The electronic data will be preserved in multiple on-site backups in the form of DVDs and RAID hard drive storage. Copies of the (deidentified, see Other) electronic data will be preserved online via Unite (www.unite.utah.edu/), a University of Utah online data repository. Additional backup on external hard drives stored off campus will be included, and te PI and her students

will be responsible for the backups and storage of the hard drives. Original laboratory notebooks will be secured by the PI in her campus office.

The data will be archived at the end of the project in USpace, the University of Utah's institutional repository (http://uspace.utah.edu/), a long-term digital archive containing scholarly or artistic work produced by researchers at the University of Utah. USpace is managed by the three libraries on the University of Utah campus. The research data from this project will be managed by the USpace and data management team at the main library, J. Willard Marriott Library. They will provide uploading, metadata, searching, and access control services. The PI will be responsible for working with the USpace and data management team to transfer the data to the Library by uploading to USpace at http://uspace.utah.edu. USpace staff will receive the file(s) and descriptive information and upload to the repository. USpace staff will apply metadata and contact the researcher with any questions to ensure that the uploaded information is correct. The PI will provide a summary of the research and descriptive terms to be used applying metadata.

Research data residing in USpace is openly accessible on the internet. The PI will transfer the research data from this proposed project to the Library after completion of the research. If patents result from the research, then the data will be suppressed until patents have been received. Otherwise the data will be suppressed until all submitted papers have been published. Research data will be fully accessible via USpace for a period of time deemed relevant for the data, typically 5 years for the raw data described above, but not less than three years. Final products will be maintained indefinitely. In the event the PI leaves the University, the data shall remain in USpace for a period of 5 years.

CONTENTdm Digital Collection Management Software is the software platform used for the data repository service (and the Library's institutional repository service). CONTENTdm is a product of OCLC http://www.contentdm.org/ and fully compliant with OAI-PMH version 2.0. It is administered by the IT staff of the Marriott Library who is responsible for its maintenance, upgrading, and security.

Research data deposited in USpace receive a persistent URL (reference URL) that will not break. Each item in USpace can link to other items in USpace and the internet. The data from the proposed research can be linked to the published research article.

Data will, in principle, be available for access and sharing as soon as is reasonably possible, and not longer than two years after the acquisition of the data. As described above, the data will be indefinitely or a minium of 5 years, exceeding the NSF guidelines to preserve the data at least three years beyond the award period, as required by NSF guidelines.

Other

No significant intellectual property issues involved with the acquisition of the data are anticipated. In the event that discoveries or inventions are made in direct connection with this data, access to the data will be granted upon request once appropriate invention disclosures and/or provisional patent filings are made.

The data acquired and preserved in the context of this proposal will be further governed by the University of Utah's policies pertaining to intellectual property, record retention, and data management.