**MODEL CREDIBILITY PLAN**

Ongoing refinement of the IIRABM will follow the evolving guidelines provided by the MSM Consortium Committee on Credible Practice of Modeling & Simulation in Healthcare as expressed in their ongoing refinement of a statement outlining the “Ten Simple Rules of Credible Practice.” As a member of the Committee on Credible Practice, Dr. An is well versed in the primary issues intended to be encapsulated in those guidelines, which primarily center on issues of **transparency, verification/reproducibility and validation**. Furthermore, as noted elsewhere in the proposal, the planned work involves an expansion of the current approaches to using and evaluating ABMs; as such we are proposing to alter the landscape of model use and validation. Our current project will address these issues in the following manner:

**Transparency:** As per our Data and Resource Sharing Plan, the source code for the IIRABM will be made publicly available, licensed under the Gnu Public License (GPL), and kept in a GitHub repository. This source code will be updated regularly as improvements are made to the model. Similarly, developed algorithms for analysis and optimization will be available in the GitHub repository. Published/presented reporting of this work will involve detailed descriptions of our investigatory workflow.

**Verification/Reproducibility/Validation:** We plan to have a 3rd party not involved with this project evaluate our procedures for the refinements of the IIRABM, but more importantly, help us define appropriate processes for the documentation and dissemination of the simulation data analysis/visualization methods (Aim 1) and our procedures for performing the control discovery/optimization work in Aim 2. We are dealing with a different intellectual task than is previously covered by Credible Practice standards, therefore we will work closely with the 3rd Party evaluators to obtain feedback in how we document, report and evaluate our investigatory workflows.

**Consortium Contribution:** We have budgeted funds in addition to consulting costs to be allocated for carrying out our Model Credibility Plan (an additional $3000/year). We will work with the IMAG Consortium to refine the procedures to be used in order to be in compliance with the guidelines put forth by the Committee on Credible Practice of Modeling & Simulation in Healthcare, and help inform the expansion of those guidelines to cover the type of investigations proposed in this project.