Using Analogy to Explain Research Methods to Non-Scientists

Truly informed consent may depend largely on subjects’ understanding of research methods. Yet, these methods may be foreign, or even counter-intuitive, to non-scientist subjects. Terminology such as random assignment may only complicate matters, as when medical research is confused with medical treatment, or chance is confused with luck. It may be difficult for subjects of clinical research who are not familiar with clinical research methodology to understand that a doctor would not assign subjects based on their individual treatment needs, or that research subjects should not hope to “get lucky” and be assigned the experimental drug.

One approach that has been suggested for explaining what may be hard-to-understand scientific methods is to use a “bottom up” analogy, based on subjects’ experience, presented in pictures, and discussed in culturally relevant terms. The approach capitalizes on the idea that new knowledge is meaningful when related to existing knowledge. For example, people in agrarian cultures may better understand the logic of random assignment if it is first explained in the context of trying out whether a fertilizer (versus no fertilizer) improves a crop of corn. Once this familiar concept is discussed and understood, the analogy to random assignment of human subjects in clinical research can be explained and discussed with careful attention to dispelling semantic confusion.

Corneli, et al. describe how such explanatory material was developed and assembled into pictorial counseling cards which can be presented to potential research subjects. Some of their counseling card pictures and the explanations that link an analogy to the research procedure can be seen at http://bioethics.unc.edu. To learn more about this approach, and ways in which it might be generalized for communicating effectively with research subjects in other situations, you will want to read their article: