



2.078 Guidelines to Prevent Malevolent Use of Biomedical Research

Physicians who engage in biomedical research are bound by the ethical obligations of the medical profession and also are required to meet responsibilities of the scientific community. Beyond their commitment to the advancement of scientific knowledge and the betterment of public health, physician-researchers must strive to maintain public trust in the profession through their commitment to public welfare and safety, as demonstrated through individual responsibility, commitment to peer review, and transparency in the design, execution, and reporting of research.

Biomedical research may generate knowledge with potential for both beneficial and harmful application. Before participating in research, physician-researchers should assess foreseeable ramifications of their research in an effort to balance the promise of benefit from biomedical innovation against potential harms from corrupt application of the findings.

In exceptional cases, assessment of the balance of future harms and benefits of research may preclude participation in the research; for instance, when the goals of research are antithetical to the foundations of the medical profession, as with the development of biological or chemical weapons. Properly designed biomedical research to develop defenses against such weapons is ethical.

The potential harms associated with some research may warrant regulatory oversight. Physician-researchers have a responsibility not only to adhere to standards for research, but also to lend their expertise to the development of safeguards and oversight mechanisms, both nationally and internationally. Oversight mechanisms should balance the need to advance science with the risk of malevolent application.

After research has been conducted, consideration should be given to the risk of unrestricted dissemination of the results. Only under rare circumstances should findings be withheld, and then only to the extent required to reasonably protect against dangerous misuse.

These ethical principles should be part of the education and training of all physicians involved in biomedical research.

Issued December 2004 based on the report "Guidelines to Prevent Malevolent Use of Biomedical Research," adopted June 2004. Publication of the report is forthcoming in *Cambridge Quarterly of Healthcare Ethics*.