

**BEFORE: 311 words**

Many professions employ codes of conduct. They're not laws, and they probably really can't even be called guidelines. They are designed to make good people better and to provide some consistency and sustainability in what acceptable norms are for good behavior. Code of conduct is not likely to have any impact whatsoever on bad people. People who are intent on malicious behavior are certainly not going to be paying any attention to some code of conduct even if it's of their employer such as a research institution or university.

The key elements for an effective code of conduct are first to make clear lines of authority and responsibility within the institution, to describe the organizational context for the code of conduct including how it can be enforced, how questionable behavior can be reported, some kind of specific training and possibly even annual refreshers of what's expected in the organization.

Often such training can be combined with research ethics training, with research integrity training - kinds of things that all research organizations are doing anyway and in this implementation of this code of conduct it is really important that the criteria that we spoke of previously - seven deadly sisters or sins - the kinds of research which can in fact lead to dual use, dangerous dual use, has to be the core message of a code of conduct and how it's communicated to all researchers.

In developing a code of conduct for any given institution or organization or society it is absolutely critical to involve the community that's going to be expected to follow the code of conduct in its development; specific wording; definitions all need to be explicitly stated in developing some kind of group environment so that there's both understanding and buy-in on the part of researchers who are expected to conduct themselves according to a code of conduct.

**AFTER: Jennifer Elin Cole, writeforyourbrand.com 187 words**

Codes of conduct exist to govern behavior in most professions, including the life sciences. Not enforceable by law, these codes define acceptable actions and identify consequences for those who fail to uphold the defined standards. And while a code of conduct encourages ethical behavior among responsible scientists and researchers, it is unlikely to affect those willing to do harm with Dual Use findings.

An effective code of conduct describes the organizational context for the document, clear lines of institutional authority, behavioral expectations regarding the previously described "Seven Deadly Sisters" of highest risk Dual Use research, reporting and enforcement mechanisms, and training requirements for those subject to the code.

It is critical for institutional policy makers to include its employees, especially those involved in potential Dual Use research and subject to the Code of Conduct, in the creation process. It is

much more likely these individuals will accept the code if they are asked to contribute conceptually and help write it.

Organizations may educate its employees, especially those involved in potential Dual Use research, on the institutional Code of Conduct during annual ethics and integrity in research training.

**ORIGINAL 128 words**

Who are the target audiences for codes of conduct? As mentioned, its life sciences professional societies and associations, research institutions themselves, industry that either conducts the research or makes use of the research findings, people and research leadership in organizations, overseers of research in organizations, of course individual life scientists and everyone involved in the research program down to students and technicians. The future now is such that funding agencies and Journal editors and publishers are going to be paying attention to dual use research of concern, so it's incumbent upon the researchers and their management to themselves be paying attention. Otherwise they are going to find themselves caught short when they get to a point of trying to publish or otherwise widely disseminate information about their research.

**AFTER: Jennifer Elin Cole, writeforyourbrand.com 76 words**

As described above, anyone involved in life sciences research, as well as life sciences professional societies and associations, research institutions, and industries that either conduct research or makes use of the research findings, are well-served by a clear and strong Code of Conduct.

Additionally, written policies detailing ethical behavioral concerning Dual Use research can positively impact editors, reviewers, publishers, and funding agencies by providing well-defined expectations regarding the dissemination of Dual Use research findings.