

## **Responsible conduct of biomedical research**

“Health law and ethics: preventing scientific misconduct”

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Similar ideas to the Jasanoff article on disagreement about what constitutes scientific misconduct. Cites federal commission definition as a violation of principle (truth & fairness in research and communication of results) with examples: misappropriation—plagiarism etc, interference, misrepresentation, obstruction of investigations, noncomplicance w/ regulations. This was an expansion of earlier NSF/HHS definition of “other serious deviation” from accepted scientific practice. There are arguments still as to whether this is too broad or too narrow (should it include failure to publish negative results, repetitive publication, selective reporting?).

As for prevalence, it’s difficult to determine, and quantitative studies looking at records for publication reporting accuracy, knowledge of colleagues’ misconduct, or routine data auditing disagree. The numbers probably don’t matter so much as the effect of publicizing a case of misconduct on the reputations of not only the individuals/institutions involved but on science as a whole.

Weed proposes a framework for preventing incidents of misconduct based on public health models: that is, consisting of primary, secondary, and tertiary prevention.

1. Identifying and removing factors that cause misconduct and adding factors that reduce it. These could be external and internal factors (competition, poor mentoring, psychiatric illness). The latter may be dealt with by treatment. As for the former, doing away w/ honorary authorship & emphasizing quality over quantity in publications may not help much because they may not affect the inherent publication pressures. Teaching ethics may help make up for lack of mentoring, but only to a limited extent as there are so many more scenarios out there than rules an ethicist could come up with. Leading by example may be what’s necessary. The problems with this primary prevention model lie in the dearth of evidence for defining the factors leading to misconduct, determining how large their role is, and how much suggested interventions can affect them.
2. Early detection plus effective “treatment” (ie investigation procedures and sanctions). Auditing, periodic review, more mentors, ensuring due process by institutionalizing investigations. Sanctions may include withholding federal funds or publication rights in a journal. Problems? Increased surveillance will result in more cases coming to light, & the public may interpret the problem as larger than it really is. Also there’s no evidence of how effective sanctions will be.
3. Rehab. Same problems as above, any answers are based on little evidence.

Weed concludes that the issue may be more do we want to study our own conduct, rather than how we should do it. In the course of scientific investigation we’ll figure this out one day, but for now we should work on better investigations, more ethics discussion, better mentoring.