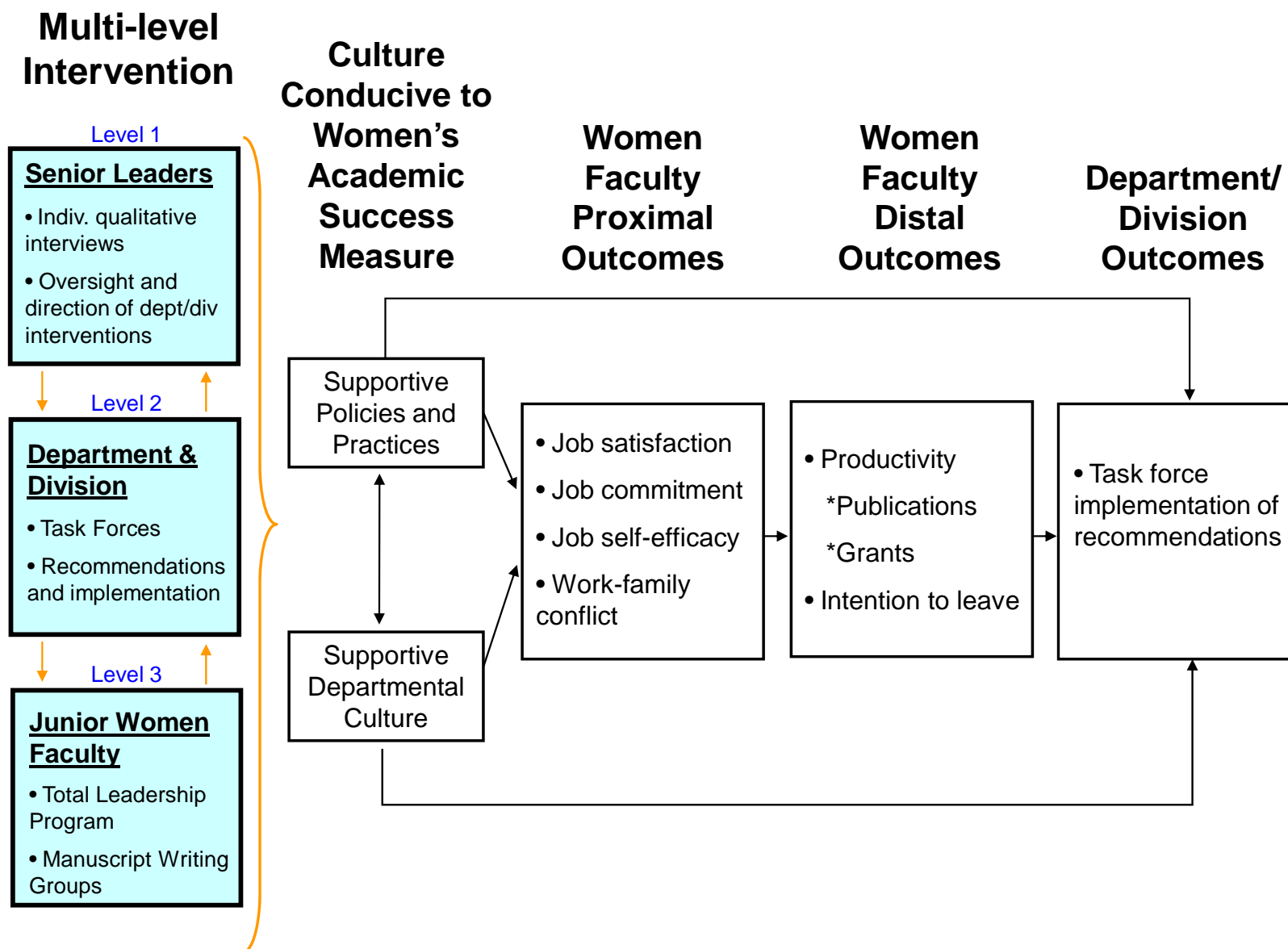


## Overview of NIH-TAC (*Transforming Academic Culture*) Trial



## Executive Summary

### NIH-TAC Trial (*Transforming Academic Culture*)

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Women have not advanced through the academic pipeline despite decades of increased representation in medical schools, fellowships, and junior faculty ranks. According to national data from the AAMC, from 1985 to 2009, the percentage of all women faculty at the full professor rank rose from 9.9% to 12.4%, an increase of only 2.5% over a period of 24 years. Because of the dearth of women leaders in science, a 2007 National Academies report urgently called for a broad, national effort to maximize the potential of women scientists. In response, NIH developed a unique RO1 funding opportunity to accelerate progress in advancing women's careers in medicine and science.

With enthusiastic support from the Dean of the School of Medicine and the President of the University of Pennsylvania, a multidisciplinary team of faculty and researchers at Penn are implementing a cluster-randomized intervention trial. We hypothesize that this multi-level, coordinated intervention will improve academic productivity, job satisfaction, and the overall quality of life for junior women faculty in intervention departments compared with their counterparts in control departments. The goal is to create an environment where women can succeed fully in their careers, thus maximizing their contributions to academic medicine and improving the workplace for all faculty, both men and women.

Eligible departments and divisions in the School of Medicine have been randomly assigned to intervention and control groups. The intervention includes three components: 1) junior women faculty participation in the nationally-recognized Total Leadership Program and a series of Writing Workshops on manuscript preparation; 2) specific sessions for the leaders of intervention departments and divisions; 3) structured, facilitated task forces in each intervention department/division to conduct analyses of work practices, recruitment, mentorship, and cultural attitudes and develop recommendations for change. We will test a theoretical model that explores whether the intervention initiative improves the supportiveness of the work environment for women faculty. We developed a new survey tool for this analysis, the Culture Conducive to Women's Academic Success (CCWAS) measure. Key facets of the CCWAS measure include: interpersonal inclusiveness, equal access to resources, support for work-family needs, and freedom from sexual harassment and unconscious bias. Greater supportiveness is expected to translate into improved personal and professional outcomes for women faculty.

We have enrolled 134 women in 27 departments/divisions. Based on previous pilot data from Penn, we estimate that we will have greater than 80 percent power to detect an increase of 1.5 newly accepted publications per year, a 50% improvement in the average annual number of publications (mean=3, sd=3 per year). The study will have greater power to detect improvements in perceptions of the work environment, job satisfaction and quality of life. General linear regression models will be used to estimate associations between within-woman change in study outcomes and treatment assignment. The model will incorporate the clustering by division and adjust statistical tests for any correlation induced by the clustered design. Additional analyses will examine unit level average performance outcomes to identify department/divisional predictors of success. Based on organizational change theory and the extraordinary commitment of resources from the School of Medicine, this intervention has enormous potential to demonstrate institutional change and rigorously evaluate promising approaches to improve the success of women faculty in academic medicine.