



C - CHANGE FACULTY AND MEDICAL STUDENT SURVEYS

TOOLS MEASURING DIMENSIONS OF THE EXISTING CULTURE IN ORDER TO ADDRESS THE PROFESSIONAL AND PERSONAL DEVELOPMENT OF FACULTY AND STUDENTS IN ACADEMIC MEDICAL CENTERS

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Development of the C - Change Surveys

The National Initiative on Gender, Culture and Leadership in Medicine, known as C - Change (for culture change) and housed at Brandeis University, is dedicated to improving the culture of academic medicine through research and action. Our objective is to promote an inclusive, affirming, relational and energizing working environment for all medical school faculty and trainees, at the same time increasing the diversity of leadership in academic medicine.

In an initial phase, C - Change has conducted in depth interviews with male and female faculty in five academic medical centers in order to document the culture and issues affecting faculty productivity and well-being.^{1-3,5-10} Those qualitative interview data served as basis for the construction of an extensive quantitative survey instrument, the C - Change Faculty Survey,[©] which systematically explores and documents the experiences of medical school faculty and the organizational culture in their academic medical centers. Randomly selected faculty in each of a stratified random sample of 26 schools were surveyed using the Survey. This large, nationally representative, dataset of faculty responses serves as a rigorously analytic resource to

investigate important topics, such as the vitality and retention of academic faculty. Survey findings in individual institutions provide a solid foundation for developing activities to support an enhanced working environment and set of values in academic medicine. Our national normative C - Change Survey data allow medical schools to compare themselves with other similar institutions. Recent C - Change research identifies dimensions of the culture as measured by the survey that predict faculty intention to leave due to dissatisfaction,¹¹ mentoring and vitality, and differences in the experiences of faculty sub-populations.¹²⁻¹³ The faculty survey was later adapted for medical students and residents to measure their perceptions of their learning environment and professionalism, and offers insights into the “hidden curriculum.”

The C - Change Surveys are available for use by academic medical centers wishing to assess and improve their culture and existing practices in order to create a more academically productive, inclusive, diverse and humanistic environment where all people can thrive. The Surveys allow detailed exploration of the foundations of the development of human capital, (e.g., trust, relationships, perception of opportunity, professionalism and the learning environment) as well as the waste of such human capital. (e.g., disconnection, causes of dissatisfaction, burnout, and desire to leave academic medicine) When used in parallel, the Student and Faculty Surveys provide credible and powerful tools for improvements. Survey findings can address accreditation requirements.

Content of the C - Change Surveys

C - Change Faculty Survey. The C - Change Faculty Survey assesses medical faculty perceptions of their organizational culture and professional experiences. It consists of 74 questions that assess levels of vitality, trust, competition, professionalism, feelings of being valued and belonging, gender and diversity inclusion and equity, and other constructs related to the organizational culture for faculty. It also collects data on faculty roles (e.g., percent time spent in research, education, administration, clinical time) and faculty perception of their school’s support for career development, mentoring and work-life management. It assesses burnout and faculty commitment to their institution, as well as intention to leave academic medicine.

Twelve discrete scales with demonstrated statistical reliability, developed to summarize C - Change data along important dimensions of the culture, allow comparison of sub-populations and investigate outcomes of interest. The 12 scales are:

1. Vitality/Engagement
2. Self-Efficacy in Career Advancement
3. Perceptions of Institutional Support
4. Relationships, Inclusion, Trust
5. Personal and Institutional Values Alignment

6. Ethical and Moral Distress
7. Leadership Aspirations
8. Gender Equity
9. Equity for members of groups underrepresented in medicine
10. Work-Life Integration
11. Perception of Institutional Change Efforts for Diversity
12. Perception of Institutional Change Efforts for Faculty Support

The Faculty Survey can be used in its entirety or in short-form for the following purposes:

- assessment of the culture and faculty professional experiences
- collection of data for accreditation purposes
- to identify areas for improvement
- program evaluation
- quality improvement
- to track the culture or special dimensions of the culture
- in modular format to focus on dimensions of particular interest
- as a pre/post measurement tool
- pulse data collection
- comparison of sub-populations

C - Change Medical Student Survey. The C - Change Medical Student Survey © assesses the learning environment and the development of professionalism among medical students. It consists of 38 questions that assess relationships, trust, feelings of being valued and belonging, ethical issues, gender and diversity equity, perception of their school's support for career development, and other constructs related to the professional development of students.

Data from the C - Change Medical Student Survey are analyzed along a subset of the same dimensions as the faculty data:

1. Vitality/Engagement
2. Self-Efficacy in Career Advancement
3. Perceptions of Institutional Support
4. Relationships, Inclusion, Trust
5. Personal and Institutional Values Alignment
6. Ethical and Moral Distress
7. Gender Equity
8. Equity for Members of Groups Underrepresented in Medicine
9. Work-Life Integration

Administration of the C - Change Surveys

Both the C - Change Faculty Survey and the Medical Student Survey are fielded electronically. The C - Change Faculty Survey takes about 20 minutes to complete and the Medical Student Survey takes about 10 minutes. The Surveys are hosted on a secure external website and administered by the C - Change team at Brandeis University to ensure confidentiality of responses and help achieve a high response rate. Data are provided to schools in aggregate form to protect the anonymity of respondents. If preferred, the Medical Student Survey can be fielded in-house and/or in paper and pencil format.

C - Change works closely with medical schools to understand any unique needs they might have in survey adaptation or fielding, and administers the Survey. C - Change works in collaboration with each institution to develop a strong communications plan to enable a high response rate. Depending on the size and analytic needs of the institution, C - Change can recommend and develop a sampling plan or field the Survey to the full census of the faculty and students as appropriate.

Analysis and Reporting of Study Findings

C - Change creates the scales representing dimensions of the culture and other analytic variables of interest, and prepares data tables with frequencies for all survey variables. National faculty data are provided as comparison to help identify similarities and differences with the study institution.

Fee Structure

Pricing of the C - Change Faculty Survey depends on study specifics, such as the size of the study population, analysis of sub-populations, or customized benchmarking.

The base survey price includes:

- consultation on institutional needs
- preparation and customization of the survey
- design of a sampling plan
- cover letters
- management of e-mail communications with respondents
- electronic fielding of the survey
- follow-up reminders
- data analysis
- data tables with institutional results and national data comparisons
- compilation of respondent narrative comments

Options available at additional cost are distribution and processing of paper surveys; customized analyses based on specific institutional interests; narrative summary report and display of key findings in graphical format and PowerPoint.

C - Change Survey Sample Timeline

Week 1	Project launch discussion of scope of survey, population to survey, timing of survey
Weeks 2-3	Survey customized Communications drafted Sampling/e-mail specifications finalized E-mail addresses provided to C - Change
Week 4	Survey finalized Communications finalized
Weeks 5-7	Survey in field
Week 8-10	Data programming and analysis conducted
Weeks 11	Data tables with national comparisons delivered
Weeks 11-12	Study debriefing

C - Change will be pleased to work with you to customize a project and timeline that meets your institution’s needs.

Customization for Different Populations

The Survey can be adapted for faculty in other health care disciplines and higher education, and for staff.

Consultation Services and C - Change Survey

Assisting institutions to collect and use their faculty survey data effectively and constructively are central elements of the services provided with the C - Change Survey. C - Change offers consultation on implementing data-action cycles, i.e., change activities that are appropriate and responsive to Survey findings.

C - Change can conduct discussion groups, interviews and/or workshops with leaders or constituent groups in the academic medical center for multiple purposes:

- For presentation of data
- As an engagement of stakeholder strategy

- To address issues that emerge from the Survey
- To help formulate and implement change activities
- As part of a needs assessment to collect in-depth information about aspects of the culture

Please contact Dr. Linda Pololi at lpololi@brandeis.edu or 781.736.8120 or cchange@brandeis.edu for further information about use of the C - Change Surveys.

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Selected C - Change Publications

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15. Krupat E, Pololi LH, Schnell ER, Kern DE. Changing the culture of academic medicine: the C - Change Learning Action Network and its impact at participating medical schools. *Academic Medicine*. 2013;88:1252-1258.