

Table 1a: Professionalism Assessments

Name of Assessment	Description	No. of items/codes	Reliability of data/codes (see method for definitions)	Validity/trustworthiness of data (see method for definitions)	Notes
Ethics-Affective					
Anderson Cheating Questionnaire (Anderson & Obenshain, 1994)	Assesses opinions about extent to which behaviors are ethical and prevalent; self-administered questionnaire; yes/no response options (Y/N)	15	None reported	None reported	Purpose: Research Setting: Medical school Participants: Medical students (all years), faculty
Baldwin Cheating Questionnaire (Baldwin, et al., 1996)	Assesses attitudes toward cheating, observations of cheating, and own cheating behavior; self-administered questionnaire; 7 pt scale ("strongly agree" to "strongly disagree"), Y/N	20	None reported	None reported	Purpose: Research Setting: 31 medical schools Participants: Medical students (2nd-yr.)
Coverdale Attitudes toward Doctors' Social and Sexual Contact with Patients Questionnaire (Coverdale & Turbott, 1997)	Assesses attitudes toward physicians' social and sexual contact with patients; self-administered questionnaire; 3-point scale ("usually" to "never" appropriate), qualitative	22	None reported	None reported	Purpose: Education Setting: Medical school (New Zealand) Participants: Medical students (5th-yr.); survey has also been used with practicing physicians
Coverdale Cheating Behaviors Questionnaire (Coverdale & Henning, 2000)	Assesses opinions toward unacceptable and acceptable behaviors; self-administered questionnaire; 3 pt scale ("acceptable, neutral, unacceptable"), frequency question	20	None reported	None reported	Purpose: Education Setting: Medical school (New Zealand) Participants: Medical students (2nd & 4th-yr.)
Feudtner Personal Development and Ethical Environment Survey (Feudtner et al., 1994)	Assesses 1) whether students encountered ethically problematic situations, 2) their attitudes toward those situations, 3) their perceptions of their personal ethical development; self-administered questionnaire; multiple choice questionnaire (MCQ), qualitative	38	None reported	Face Content: Preliminary research	Purpose: Research Setting: 6 medical schools Participants: Medical students (3rd & 4th-yr.)
Freeman Deception of Third-Party Payers Questionnaire (Freeman et al., 1999)	Assesses willingness to deceive third-party payers and attitudes toward same; self-administered questionnaire; 5 pt scale ("clearly justified" to "clearly unjustified"), 2 pt scale ("deceive" or "not deceive"), Y/N	24	None reported	Face Construct: Positive relationship between sanctioning deception, severity of illness	Purpose: Research Setting: Metropolitan areas nationwide Participants: Practicing physicians (internal medicine)

Green Survey to Determine Willingness to Deceive (Green et al., 2000)	Assesses attitudes toward using deception; self-administered questionnaire; 5 pt scale ("very likely" to "very unlikely" to deceive)	5 vignettes, 2 versions of each	None reported	Face Content: Item relevance tested via field tests	Purpose: Research Setting: Nationwide Participants: Residents (members of the American College of Physicians)
Hayes Survey on End-of-Life Decision Making ((Hayes et al., 1999)	Assesses attitudes toward end-of-life issues; self-administered questionnaire; two 5 pt scales ("very important" to "very unimportant", "strongly agree" to "strongly disagree"); Y/N	31	None reported	None reported	Purpose: Education Setting: A medical school Participants: Medical students (3rd-yr)
Levitt Ethical Issues Questionnaire (Levitt, 1994)	Assesses frequency of encountering, and difficulties posed by, ethical issues; self-administered questionnaire; 5 pt scale ("never" to "at least once a day"); 4 pt scale ("the least difficult" to "the most difficult")	28	None reported	Face Content: Expert review	Purpose: Education Setting: Medical center Participants: Residents (family medicine), faculty
Novack Physicians' Attitudes toward Using Deception Questionnaire (Novack et al., 1989)	Assesses willingness to use deception; self-administered questionnaire; MCQ, 4 pt scale ("strongly agree" to "strongly disagree"), 4 pt scale ("never" to "often"), ranking, qualitative	19	None reported	Face	Purpose: Research Setting: Statewide Participants: Practicing physicians
Shorr Assessment of Medical Ethics Education (Shorr et al., 1994)	Assesses attitudes toward and knowledge of selected ethical issues; self-administered questionnaire, MCQ, true/false (T/F)	13	None reported	Face	Purpose: Education Setting: Medical school Participants: Medical students (1st-yr.)
Simpson Medical Student Honor Code Survey (Simpson et al., 1989)	Assesses opinions about cheating; self-administered questionnaire; 2 pt scale ("appropriate" or "inappropriate"), 4 pt scale ("strongly agree" to "strongly disagree")	18	None reported	None reported	Purpose: Research Setting: Medical school Participants: Medical students (1st to 4th-yr.)
Sulmasy Questionnaire for House Officers (Sulmasy et al., 1995)	Assesses knowledge, attitudes and confidence pertaining to selected ethical issues; self-administered questionnaire; MCQ, T/F, 5 pt scale ("very low confidence" to "very high confidence")	50	None (for items assessing attitudes)	Face	Purpose: Research Setting: Two medical centers Participants: Residents and practicing physicians (internal medicine)

Waz Assessment of Ethics Education (Waz & Henkind, 1995)	Assesses frequency of encountering and comfort with selected ethical situations; self-administered questionnaire; 3 pt scale ("very frequent" to "never"), 3 pt scale ("very comfortable" to "uncomfortable")	28	None reported	Content: Questionnaire items based on data obtained from a preceding exploratory study	Purpose: Education Setting: Medical centers Participants: Residents (pediatrics)
White Ethical Dilemmas Survey (White et al., 1991)	Assesses most difficult ethical dilemmas; structured interview; qualitative	6 categories emerged from data collected	None reported	None reported	Purpose: Education Setting: 5 medical centers Participants: Residents (pediatrics) Feasibility: Train coders to analyze data
Ethics-Cognitive					
Beijing-San Francisco Study of Medical Practices Questionnaire (Feldman et al., 1999)	Assesses ethical reasoning; self-administered questionnaire; MCQ, Y/N/other, qualitative	14	None reported	Face	Purpose: Research Setting: Multiple practices (U.S. and China) Participants: Practicing physicians (internal medicine)
Christie Ethical Decision-making Questionnaire (Hoffmaster et al., 1991)	Assesses ethical decision-making; self-administered questionnaire; MCQ	24	Test-retest: 0.75-90	Face Content: Cases developed from physicians' experiences, reviewed by experts	Purpose: Research Setting: Britain, Canada, United States Participants: Practicing physicians (family medicine)
Defining Issues Test (DIT) (Baldwin & Bunch, 2000; Self et al., 1992)	Assesses moral reasoning; self-administered questionnaire; 5 pt scale ("great importance" to "no importance"), 4 pt rank order ("most important" to "fourth most important")	102	Test-retest: 0.65-0.75	Previously established; In 1992 study discriminated between ethics course participants and non-participants	Purpose: Education, research Setting: Medical schools, medical centers Participants: Medical students, residents, practicing physicians
Ethics and Health Care Survey Instrument (Goldie et al., 2002)	Assesses knowledge of ethical issues; self-administered questionnaire; MCQ, qualitative	24	None reported	Face Content: Expert review Construct: Detected changes due to learning via cohort study	Purpose: Education Setting: Medical school Participants: Medical students (2nd-yr.)
Farber Decision to Breach Confidentiality Questionnaire (Farber et al., 1989)	Assesses ethical reasoning; self-administered questionnaire; 7 pt scale (from "don't tell police" to "should definitely tell police"), qualitative	14	None reported	Construct: Relationship between disclosure and crime type	Purpose: Education Setting: Medical center Participants: Residents (internal medicine)

Fleetwood Medical Ethics Assessment (Fleetwood et al., 2000)	Assesses ethical knowledge and behaviors; self-administered questionnaire and a checklist completed by standardized patients (SPs); MCQ, checklist	29 (knowledge) 11 (checklist)	None reported	Content: Expert review (checklist)	Purpose: Education Setting: Medical school Participants: Medical students (2nd-yr.) Feasibility: Train SPs
Gramelspacher Perceptions of Ethical Problems Interview (Gramelspacher et al., 1986)	Assesses knowledge of ethical problem; structured interview; qualitative	4 categories emerged	None reported	None reported	Purpose: Research Setting: Medical center Participants: Residents, fellows (internal medicine), nurses Feasibility: Train coders
Grundstein-Amado Ethical Decision Making Processes Interview (Grundstein-Amado, 1992)	Assesses ethical decision making; structured interview; qualitative	41 codes	None reported	None reported	Purpose: Research Setting: Two medical centers Participants: Practicing physicians and nurses Feasibility: Train coders
Hayes Ethical Reasoning Assessment (Hayes et al., 1999)	Assesses ethical reasoning skills; self-administered questionnaire; qualitative	4 categories emerged	Intra-rater=0.93	None reported	Purpose: Education Setting: Medical school Participants: Medical students (3rd-yr.) Feasibility: Train coders
Hebert's Ethical Sensitivity Vignettes (Hebert et al., 1992)	Assesses ethical knowledge; self-administered questionnaire; qualitative	4 open-ended questions	None reported	None reported	Purpose: Research Setting: Medical school Participants: Medical students (all years) Feasibility: Train coders
Knabe Understanding of Ethical Issues in the Ambulatory Setting Questionnaire (Knabe et al., 1994)	Assesses knowledge of ethical issues; self-administered questionnaire; Y/N, 5 pt scale ("very significant" to "very insignificant"), qualitative	36	None reported	None reported	Purpose: Research Setting: Medical school Participants: Medical students (2nd to 4th-yr.)
Moral Judgment Test (Lind, 2000)	Assesses moral attitudes and competencies; self-administered questionnaire; MCQ	24	None reported	Construct: Results consistent with theoretical precepts	Purpose: Research Setting: Medical school (Germany) Participants: Medical students (all years)
Peter Moral reasoning Questionnaire (Peter & Gallop, 1994)	Assesses moral reasoning; self-administered questionnaire; qualitative	Lyons' Coding Scheme-2 categories; Walker Classification-2 categories	Inter-rater (Kappa): 0.88 (Lyons Coding Scheme), 0.9 (Walker Classification)	None reported	Purpose: Research Setting: Medical center Participants: Medical students (3rd and 4th-yr.), nurses Feasibility: Train coders

Professional Decisions Values Test (Rezler et al., 1992)	Assesses ethical reasoning; self-administered questionnaire; MCQ	20	Inter-item (Cronbach's alpha): 0-0.23, Test-retest: 0.56-0.92	Content: Expert review Construct: Results consistent with theoretical precepts	Purpose: Research Setting: Medical school, law school Participants: Medical and law students (1st -yr.)
Savulescu Ethics Competence Tool (Savulescu et al., 1999)	Assesses ethical reasoning; self-administered questionnaire; qualitative	18	Inter-rater: Spearman's rank correlation (signif.); Wilcoxon signed rank test (not signif.); Test-retest: F-test (not signif.)	Content: Signif. correlation between untrained and trained raters	Purpose: Education Setting: Medical school (Australia) Participants: Medical students (1st and 3rd clinical yr.) Feasibility: Train raters
Shapiro Assessment of Ethical Issues (Shapiro & Miller, 1994)	Assesses ethics knowledge and decision-making; self-administered questionnaire; qualitative	4 codes	Inter-rater (mean)=0.82	None reported	Purpose: Education Setting: Medical school Participants: Medical students (2nd yr.) Feasibility: Train coders
Shorr Assessment of Medical Ethics Education (Shorr et al., 1994)	Assesses attitudes toward and knowledge of selected ethical issues; self-administered questionnaire; MCQ; true/false (T/F)	13	None reported	Face	Purpose: Education Setting: Medical school Participants: Medical students (1st-yr.)
Siegler Assessment (Siegler et al., 1982)	Assesses ethical reasoning; self-administered questionnaire; qualitative	15 codes	Inter-rater: 0.88	Construct: Discrimintaed between course participants and non-participants	Purpose: Education Setting: Medical school Participants: Medical students (3rd yr.) Feasibility: Train coders
Smith Assessment of Moral Reasoning and Ethical Judgment (Smith et al., 1994)	Assesses ability to recognize and address ethical issues; data collected via rating by SP and self-administered questionnaire; 5 pt scale ("excellent" to "failing"), qualitative	5 items (one case)	Inter-rater (for qualitative only): 0.6-0.9 (Rho)	None reported	Purpose: Education Setting: Medical school Participants: Medical students (4th yr.) rated by SPs Feasibility: Train SPs and coders (qualitative data)
Socio-Moral Reflection Measure (Self et al., 1989)	Assesses moral reasoning; self-administered questionnaire; qualitative	9	None reported	Construct: Post-course improvement in performance	Purpose: Education Setting: Medical school Participants: Medical, veterinary students (1st yr.) Feasibility: Train coders
Spooner Ethics Test (Spooner et al., 1989)	Assesses knowledge of ethical and moral issue; self-administered questionnaire after viewing video scenarios; qualitative	6	Inter-rater: 0.76-0.97	None reported	Purpose: Education Setting: Medical school (Canada) Participants: Medical students (1st yr.) Feasibility: Train coders

Sulmasy Questionnaire for House Officers (Sulmasy et al., 1985)	Assesses knowledge, attitudes and confidence pertaining to selected ethical issues; self-administered questionnaire; MCQ, T/F, 5 pt scale ("very low confidence" to "very high confidence")	50	Inter-item: (Cronbach's alpha) 0.76-0.86 (confidence & knowledge scales)	Face	Purpose: Research Setting: Two medical centers Participants: Residents, practicing physicians (internal medicine)
Walker Perceptions of Ethics Problems Assessment (Walker et al., 1991)	Assesses perceptions of ethics problems; semi-structured interview; qualitative	19 categories	None reported	None reported	Purpose: Research Setting: Medical center Participants: Practicing physicians, nurses Feasibility: Train interviewers, coders
Wenger Orthopaedic Surgeons' Knowledge of Medical Ethics Questionnaire (Wenger & Lieberman, 1998)	Assesses knowledge of medical ethics; self-administered ;MCQ, T/F	26	Test-retest: 0.93	Content: Expert review	Purpose: Research, education Setting: Medical center Participants: Practicing physicians, residents (orthopedic surgery)
White Ethical Dilemmas Survey (White et al., 1991)	Assesses most difficult ethical dilemmas; structured interview; qualitative	6 categories emerged from data collected	None reported	None reported	Purpose: Education Setting: 5 medical centers Participants: Residents (pediatrics) Feasibility: Train coders

Ethics-Behavioral

Baldwin Cheating Questionnaire (Baldwin et al., 1996)	Assesses attitudes toward cheating, observations of cheating, and own cheating behavior; self-administered questionnaire; 7 pt scale ("strongly agree" to "strongly disagree"), Y/N	20	None reported	None reported	Purpose: Research Setting: 31 medical schools Participants: Medical students (2nd-yr.)
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Coverdale Cheating Behaviors Questionnaire (Coverdale & Henning, 2000)	Assesses opinions toward unacceptable and acceptable behaviors; self-administered questionnaire; 3 pt scale ("acceptable, neutral, unacceptable"), frequency question	20	None reported	None reported	Purpose: Education Setting: Medical school (New Zealand) Participants: Medical students (2nd & 4th-yr.)
Ethics OSCE (Singer et al., 1996)	Assesses ability to address ethical situations; trained rater observed student interact with SP; checklist ("done" or "not done")	8 to 10	Inter-rater: 0.44-0.8, Generalizability coefficient: 0.28	Face	Purpose: Education Setting: 5 medical schools Participants: Medical students (4th-yr.), foreign graduates Feasibility: Need 12 examiners/raters and 8 SPs (for 4 cases), training for each group
Fleetwood Medical Ethics Assessment (Fleetwood et al., 2000)	Assesses ethical knowledge and behaviors; self-administered questionnaire and a checklist completed by standardized patients (SPs); MCQ, checklist	29 (knowledge) 11 (checklist)	None reported	Content: Checklist reviewed by experts	Purpose: Education Setting: Medical school Participants: Medical students (2nd-yr.) Feasibility: Train SPs
Green's Guidelines on Ethics Questionnaire (Green et al., 1996)	Assesses self-reported behaviors regarding ethical issues derived from the ACP Ethics Manual; self-administered questionnaire; Y/N, if yes complete 4 pt scale and MCQ	55	None reported	Face	Purpose: Research Setting: Multiple medical centers Participants: Residents (all yrs and members of the American College of Physicians)
Holloran Ethical Decision Making Categories (Holloran et al., 1995)	Assesses ethical decision making; data obtained via medical record review; Length of stay (LOS) and qualitative data	9 categories and LOS	None reported	Construct: Could be inferred from improved performance during course implementation	Purpose: Education Setting: Medical center Participants: Residents (surgery)
Moral Behavior Analysis (Sheehan et al., 1987)	Assesses skills in addressing medical-moral problems; trained raters observed learner interactions with SP (videotaped); checklist	26	Inter-rater: 0.77-0.89	Construct: Discriminated between course participants and non-participants	Purpose: Education Setting: Medical center Participants: Residents (family medicine, internal medicine), medical students (4th-yr.) Feasibility: Train raters
Smith Assessment of Moral Reasoning and Ethical Judgment (Smith et al., 1994)	Assesses ability to recognize and address ethical issues; data collected via rating by SP and self-administered questionnaire; 5 pt scale ("excellent" to "failing"), qualitative	5 items (one case)	Inter-rater (for qualitative only): 0.6-0.9 (Rho)	None reported	Purpose: Education Setting: Medical school Participants: Medical students (4th yr.) Feasibility: Train SPs and raters (qualitative data)

White Ethical Dilemmas Survey (White et al., 1991)	Assesses most difficult ethical dilemmas; structured interview; qualitative	6 categories emerged from data collected	None reported	None reported	Purpose: Education Setting: 5 medical centers Participants: Residents (pediatrics) Feasibility: Train coders
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Ethics-Environmental

AAMC Graduation Questionnaire (Kassebaum & Cutler, 1998)	Assesses reports of mistreatment; self-administered questionnaire; 4 pt scale ("never" to "frequently"), 5 pt scale ("very satisfied" to "very dissatisfied"), Y/N, choose all that apply	22	None reported	None reported	Purpose: Research, education Setting: All medical schools in U.S. Participants: Medical students (4th-yr.)
Anderson Cheating Questionnaire (Anderson & Obenshain, 1994)	Assesses opinions about extent to which behaviors are ethical and prevalence; self-administered questionnaire; yes/no response options	15	None reported	None reported	Purpose: Research Setting: Medical school Participants: Medical students (all years), faculty
Baldwin Cheating Questionnaire (Baldwin et al., 1996)	Assesses attitudes toward cheating, observations of cheating, and own cheating behavior; self-administered questionnaire; 7 pt scale ("strongly agree" to "strongly disagree"), Y/N	20	None reported	None reported	Purpose: Research Setting: 31 medical schools Participants: Medical students (2nd-yr.)
Bissonette Ethical Issues in Clinical Education Questionnaire (Bissonette et al., 1995)	Assesses reports of ethical issues encountered in clinical education; self-administered questionnaire; qualitative	7 codes	None reported	None reported	Purpose: Education Setting: Medical school Participants: Medical students (2nd & 4th-yr.)
Elnicki Multiinstitutional Study of Medical Student Abuse (Elnicki et al., 1999)	Assesses perceptions of abuse; self-administered questionnaire; Choose all that apply, 7 pt scale ("least severe" to "most severe"), qualitative	11	None reported	None reported	Purpose: Research Setting: Medical school Participants: Medical students (3rd-yr.)
Feudtner Personal Development and Ethical Environment Survey (Feudtner et al., 1994)	Assesses 1) whether students encountered ethically problematic situations, 2) their attitudes toward those situations, 3) their perceptions of their personal ethical development; self-administered questionnaire, MCQ	38	None reported	Face Content: Preliminary research	Purpose: Research Setting: 6 medical schools Participants: Medical students (3rd & 4th-yr.)

Levitt Ethical Issues Questionnaire (Levitt et al., 1994)	Assesses frequency of encountering, and difficulties posed by, ethical issues; self-administered questionnaire; 5 pt scale ("never" to "at least once a day"), 4 pt scale ("the least difficult" to "the most difficult")	28	None reported	Face Content: Expert Review	Purpose: Education Setting: Medical center Participants: Residents (family medicine), faculty
Richardson Medical Student Perception of Mistreatment Questionnaire (Richardson et al., 1997)	Assesses incidents of mistreatment; self-administered questionnaire; 4 pt scale ("very unfavorable" to "very favorable"), Y/N	11	None reported	None reported	Purpose: Research Setting: Medical school Participants: Medical students (2nd & 3rd-yr.)
Richman Experiences of Abuse Questionnaire (Richman et al., 1992)	Assesses perceptions of abusive behavior; self-administered questionnaire; 4 pt scale ("never" to "most of the time")	8	None reported	None reported	Purpose: Research Setting: Medical school Participants: Medical student cohort followed from 1st to 4th-yr.
Satterwhite Occurrence of Unethical Situations Questionnaire (satterwhite et al., 1998)	Assesses exposure to unethical situations; self-administered questionnaire; MCQ	30	None reported	None reported	Purpose: Research Setting: Medical school Participants: Medical students (all yrs.)
Sheehan Survey of Medical Students' Perceptions of Abuse (Sheehan et al., 1990)	Assesses perceptions of abusive behavior; self-administered questionnaire; 4 pt scale ("never" to "frequently"), qualitative	44	None reported	Face	Purpose: Research Setting: 10 medical schools Participants: Medical students (4th-yr.)
Silver Medical Student Abuse Questionnaire (Silver & Glick, 1990)	Assesses perceptions of abusive behavior; self-administered; Y/N, 3 pt scale ("minor importance" to "major importance"), qualitative	10	None reported	Content: Expert review	Purpose: Research Setting: Medical school Participants: Medical students (all yrs.)
Waz Assessment of Ethics Education (Waz & Henkind, 1995)	Assesses frequency of encountering and comfort with selected ethical situations; self-administered questionnaire; 3 pt scale ("very frequent" to "never"), 3 pt scale ("very comfortable" to "uncomfortable")	28	None reported	Content: Questionnaire items based on data obtained from a preceding exploratory study	Purpose: Education Setting: Medical centers Participants: Residents (pediatrics)
White Ethical Dilemmas Survey (White et al., 1991)	Assesses most difficult ethical dilemmas; structured interview; qualitative	6 categories emerged from data collected	None reported	None reported	Purpose: Education Setting: 5 medical centers Participants: Residents (pediatrics) Feasibility: Train coders

Personal Characteristics-Affective

Allport-Vernon-Lindzey Study of Values (Hojat et al., 1998)	Assesses personal values; self-administered questionnaire; forced choice items	60	Test-retest ranged from 0.79-0.91	Construct: Previously established	Purpose: Research Setting: Medical school Participants: Medical school alumni/practicing physicians
California Psychological Inventory (Forsyth et al., 1986)	Assesses personal characteristics involved in social interactions and achievements; self-administered questionnaire; T/F	462	Test-retest: 0.6-0.75 Inter-item: 0.7-0.9	Construct: factor analysis Concurrent	Purpose: Research Setting: Residency programs (17) Participants: Residents (family medicine, internal medicine, pediatrics)
Cynicism in Medicine Questionnaire (Testerman et al., 1996)	Assesses cynicism; self-administered questionnaire; 5 pt scale ("strongly disagree" to "strongly agree")	14	Inter-item: (Cronbach's alpha) range for 4 scales=0.48-0.76	Concurrent Construct: Factor analysis	Purpose: Research Setting: Medical school, medical center Participants: Medical students, residents, faculty physicians (multiple specialties)
Emotional Intelligence Scale (Carrothers et al., 2000)	Assesses emotional intelligence; post-interview rating by interviewer; semantic differential scale	34	Inter-item: (Cronbach's alpha) 0.66-.95	Face Content: Exploratory survey Construct: Factor analysis	Purpose: Education Setting: Medical school Participants: Medical school applicants rated by medical school faculty
Jefferson Scale of Physician Empathy (Hojat et al., 2002)	Assesses empathy; self-administered questionnaire; 7 pt scale ("strongly disagree" to "strongly agree")	20	Inter-item: 0.87-0.89	Face Content: Literature review, field tests Construct: Factor analysis Concurrent	Purpose: Research Setting: Multiple Participants: Medical students, residents, practicing physicians
Measure of Intellectual Development (Swick et al., 1995)	Assesses views on the nature of knowledge and uncertainty; self-administered questionnaire; qualitative	9	Test-retest: 0.87; Inter-rater: 0.75-0.85	Previously established	Purpose: Education Setting: Medical school Participants: Medical students (2nd-yr.) Feasibility: Train coders
NEO Personality Inventory (Magee & Hojat, 1998)	Assesses personality; self-administered questionnaire; 5 pt scale ("strongly agree" to "strongly disagree")	240	Previously established	Previously established	Purpose: Research Setting: Nationwide Participants: Practicing physicians nominated for their leadership by CEOs and other institutional leaders
Physician Humanism Scale (Abbott, 1983)	Assesses attitudes toward humanism; self-administered questionnaire; 5 pt scale ("strongly agree" to "strongly disagree")	32	Split-half: 0.78	Content: Expert review Construct: Factor analysis Concurrent	Purpose: Research Setting: Medical centers nationwide Participants: Residents (family medicine, internal medicine, surgery)

Physician Reaction to Uncertainty Scale (Gerrity et al., 1990)	Assesses reactions to uncertainty; self-administered questionnaire; 6 pt scale ("strongly agree" to "strongly disagree")	22	Inter-item: (Cronbach's alpha) 0.75-0.9	Construct: Factor analysis	Purpose: Research Setting: Practices in 2 states[74], a medical school[67] Participants: Practicing physicians, medical students (2nd & 3rd-yr.)
Schwartz Values Questionnaire (Eliason & Schubot, 1995)	Assesses personal values; self-administered questionnaire; 9 pt scale ("opposed to my values" to "of supreme importance")	56	Inter-item: (Cronbach's alpha) 0.59-0.8	Previously validated, not re-validated in this study	Purpose: Research Setting: Nationwide Participants: Practicing physicians nominated for Family Doctor of the Year Award (family medicine)
Thomas-Kilmann Conflict Mode Instrument (Lachter & Mosek, 1995)	Assesses self-reported behaviors in conflict situations; self-administered questionnaire; forced choice of 2 response options	60	Inter-item: (Cronbach's alpha) 0.6; test-retest=0.64	Concurrent	Purpose: Research Setting: Medical school Participants: Medical and social work students
Totalitarian-Authoritarian-Dogmatism Questionnaire (Merrill et al., 1986)	Assesses antipathy toward patients; self-administered questionnaire; 6 pt scale ("totally disagree" to "totally agree")	16	None reported	Previously established using factor analysis	Purpose: Research Setting: Medical center Participants: Residents (internal medicine, 2nd & 3rd-yr.)
Trust in Physician Scale (Anderson & Dedrick, 1990)	Assesses patient opinions about trusting their physicians; questionnaire completed by patient; 5 pt scale ("strongly agree" to "strongly disagree")	11	Inter-item: (Cronbach's alpha) 0.85-0.91	Content: Interviews with patients and health care providers Concurrent	Purpose: Research Setting: Outpatient clinic Participants: Physicians rated by patients
Wake Forest Physician Trust Scale (Hall et al., 2002)	Assesses patient opinions about trusting their physicians; questionnaire completed by patient; 5 pt scale ("strongly agree" to "strongly disagree")	10	Inter-item: (Cronbach's alpha) 0.92-0.93; test-retest=0.75	Face Content: Expert review Construct: Factor analysis Concurrent	Purpose: Research Setting: Respondents contacted at home Participants: Regional and national random samples of patients
Wolf Perceptions of Psychological Changes Questionnaire (Wolf et al., 1989)	Assesses perceptions of psychological changes; self-administered questionnaire; 7 pt scale (from "less" to "more")	10	None reported	None reported	Purpose: Research Setting: Medical school Participants: Medical students (4th-yr.)

Comprehensive Professionalism-Cognitive

Barry Challenges to Professionalism Questionnaire (Barry et al, 2000)	Assesses professionalism knowledge; self-administered questionnaire; MCQ, 5-pt scale ("no" to "frequent experience")	6	None reported	Face Construct: Discriminated between levels of experience	Purpose: Research Setting: Medical center Participants: Medical students, residents, faculty physicians (multiple specialties)
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Ginsburg Professional Lapse Assessment (Ginsburg et al., 2002)	Assesses perceptions of professional challenges encountered in clinical settings; data obtained via focus groups; qualitative	6 categories emerged	None reported	None reported	Purpose: Research Setting: 3 medical schools Participants: Medical students (senior) Feasibility: Train interviewer, coders
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Comprehensive Professionalism-Behavioral

Amsterdam Attitudes and Communication Scale (DeHaes et al., 2001)	Assesses professionalism attitudes and behaviors and communication skills; data collected by direct observation and completion of rating form; 5 pt scale ("poor" to "excellent")	10	Generalizability coefficient: 0.809 for 12 raters and 6 items, Precision: 0.7 (gen coeff.=0.68) 6 raters (using 6 items)	Content: Expert review	Purpose: Education Setting: Medical school (Holland) Participants: Medical students (clerkship) Feasibility: Raters need 3 hours of training, live performance (real time and video) is assessed on 3 occasions, 6 raters used (including nurses and a psychologist)
Arnold Resident Evaluation Form (Arnold et al., 1984)	Assesses professionalism behaviors; rating form completed by residents' supervisors; 7 pt scale (from negative to positive description of item attribute)	11	None reported	Construct: Factor analysis	Purpose: Education Setting: Multiple residency programs Participants: Residents who graduated from a single medical school
Baker Patient Satisfaction Questionnaire (Baker, 1990)	Assesses satisfaction with doctor-patient consultations; questionnaire completed by patients; 5 pt scale ("agree" to "disagree")	18	Inter-item: (Cronbach's alpha) 0.87-0.67	Face Content: Exploratory data collection Construct: Factor analysis	Purpose: Education, research Setting: Group practice Participants: Physicians rated by patients
Beckman Transition Visit Skills (Beckman et al., 1990)	Assesses transition visit skills; data collected by direct observation and scoring of videos; checklist	9	Inter-rater: (Kappa) 0.76	Construct: Post-intervention performance improvement	Purpose: Education Setting: Medical center Participants: Residents (internal medicine) rated by trained raters Feasibility: Need time, equipment, and special training to make and score videotapes
Carney Patient Satisfaction Scale (Carney & Mitchell, 1986)	Assesses satisfaction with students' communication and attitudes; questionnaire completed by SPs; 6 pt scale ("strongly agree" to "strongly disagree")	11	Test-retest: Compared ratings of two cohorts - no signif. difference	Construct: Discriminated between levels of experience	Purpose: Education Setting: Medical school (Australia) Participants: Medical students (1st & 3rd-yr.) rated by SPs
Clinical Anesthesia System of Evaluation (Rhoton, 1994)	Assesses incidents of unprofessional behavior; open-ended card completed by supervising physicians; qualitative	6 codes	None reported	None reported	Purpose: Education Setting: Medical center Participants: Residents (anesthesiology, all years) rated by supervising physicians Feasibility: Cards completed daily

Durand's Personal Characteristics Scale (Durand et al., 1988)	Assesses medical students' personal characteristics; rating form completed by supervising physicians; 7 pt scale ("unacceptable" to "outstanding")	7	None reported	None reported	Purpose: Education, research Setting: Medical school Participants: Medical students (clerkship) rated by supervising physicians
Hemmer Professionalism Categories (Hemmer et al., 2000)	Assesses professionalism; data provided by instructors or evaluation session observer; qualitative data via evaluation session observation or written comments	6 domains/categories	None reported	None reported	Purpose: Education Setting: Medical school Participants: Medical students (3rd-yr.) rated by supervising physicians
Herman's Professional Attitudes Subscale (Herman et al., 1983)	Assesses professionalism; rating form completed by supervising physicians; 4 pt scale ("top quarter of all residents supervised" to "bottom quarter")	6-10 items	None reported	Predictive: Relationship between rating and offer of further training	Purpose: Research Setting: Multiple medical centers Participants: Residents (graduates of a single medical school) rated by supervising physicians
Humanism Scale (Hauck et al., 1990; Rogers & Coutts, 2000)	Assesses opinions about physicians' humanism; questionnaire completed by patients and SPs; semantic differential scale and numbered scale available ("strongly disagree" to "strongly agree")	24	Inter-item: (Cronbach's alpha) 0.95	Face Content: Expert review Concurrent: Inferred from positive relationship with patient satisfaction	Purpose: Education and research Setting: Medical school and 2 outpatient clinics Participants: Practicing physicians (family medicine), medical students (3rd-yr.) rated by patients or SPs
Katic Patient Satisfaction Questionnaire (Katic et al., 2001)	Assesses patients' opinions of physicians' interactions with them; questionnaire administered to patients via face-to-face interview 5 pt scale ("I completely disagree" to "I completely agree")	10	None reported	Content: Expert review Construct: Factor analysis	Purpose: Research Setting: Outpatient clinic (Croatia) Participants: Patients rated physicians
Leisen Scale for Assessing Patients' Trust in Their Physician (Leisen & Hyman, 2001)	Assesses patients' opinions about physician behaviors and office characteristics; questionnaire completed by patients; 7 pt scale ("strongly disagree" to "strongly agree")	51	Inter-item: (Cronbach's alpha) 0.84-0.97; Item-to-total: 0.5-0.93	Content: Expert review Construct: Factor analysis Concurrent	Purpose: Research Setting: Service organization Participants: Employees who had visited a physician
Linn Patient Satisfaction Questionnaire (Linn et al., 1984)	Assesses professionalism/humanism; questionnaire completed by patients; 5 pt scale ("strongly disagree" to "strongly agree")	15	None reported	None reported	Purpose: Research Setting: Medical center Participants: Residents (internal medicine)
Magrane's Patient Assessment of Medical Students' Role in Care	Assesses patients' perceptions of medical students skills and role in care; questionnaire completed by patients; 5 pt	8	None reported	None reported	Purpose: Education Setting: Medical center Participants: Patients (obstetric) rated

(Magrane, 1988)	scale ("poor" to "excellent"), qualitative				medical students (clerkship)
Matthews Patient Rating of Physician Performance Form (Matthews & Feinstein, 1989)	Assesses professionalism; questionnaire completed by patients; 10 pt scales ("unimportant" to "important", "dissatisfied" to "satisfied"), 2 pt ("usually yes" or "usually no")	84	None reported	Face Content: Exploratory study Construct: Factor analysis	Purpose: Research Setting: Medical center Participants: Patients (inpatient) rated physicians
Nurse Evaluation of Medical Housestaff Form (Butterfield & Mazzaferri, 1991)	Assesses resident professionalism; questionnaire completed by nurses; 5 pt scale ("rarely" to "almost always")	13	Generalizability coefficients: 0.72-0.94 for 10 to 17 raters	Face Content: Expert review	Purpose: Research Setting: Medical center Participants: Residents (internal medicine-general, cardiology, hematology/oncology) rated by nurses
Phelan Professional Attributes Evaluation Form (Phelan et al., 1993)	Assesses professional behavior; questionnaire completed by medical school faculty and staff; 5 pt scale ("acceptable" to "severe problem") and room for comments	31	None reported	Construct: Inferred from case disposition	Purpose: Education Setting: Medical school Participants: Medical students (all years) rated by medical school faculty and staff
Physicians' Humanistic Behaviors Questionnaire (Weaver et al., 1983)	Assesses humanistic/professionalism behaviors; rating form completed by patients; 5 pt scale ("strongly disagree" to "strongly agree")	25	None reported	Face Content: Exploratory study Concurrent	Purpose: Research Setting: Medical center Participants: Residents (internal medicine, PGY1-2) rated by patients
Prislin SP Assessment of Professionalism (Prislin et al., 2001)	Assesses professionalism; rating form completed by SPs; 5 pt scale ("outstanding" to "marginal")	4	Inter-rater: (intraclass correlation coeff) 0.60-0.65; Inter-case correlations: (intraclass correlation coeffs) 0.16 and 0.19	Construct: Factor analysis	Purpose: Education Setting: Medical school Participants: Medical students (2nd-yr.) rated by SPs Feasibility: Train SPs
Rowley Measure of Professionalism (Rowley et al., 2000)	Assesses attributes of professionalism; rating form completed by supervising physicians; 5 pt scale ("strongly disagree" to "strongly agree")	4	None reported	None reported	Purpose: Education Setting: Medical center Participants: Residents (surgery, all years) rated by supervising physicians
UCSF Physicianship Evaluation Form (Papadakis et al., 2001)	Assesses professional areas in which students need improvement; questionnaire completed by course directors; MCQ, qualitative	21	None reported	Construct: Inferred from case disposition	Purpose: Education Setting: Medical school Participants: Medical students (all years) rated by courses directors

Comprehensive Professionalism-Environmental

Cynicism in Medicine Questionnaire (Testerman et al., 1996)	Assesses cynicism; self-administered questionnaire; 5 pt scale ("strongly disagree" to "strongly agree")	14	Inter-item: (Cronbach's alpha) range for 4 scales=0.48-0.76	Concurrent Construct: Factor analysis	Purpose: Research Setting: Medical school, medical center Participants: Medical students, residents, faculty physicians (multiple specialties)
Ginsburg Professional Lapse Assessment (Ginsburg et al., 2002)	Assesses perceptions of professional challenges encountered in clinical settings; data obtained via focus groups; qualitative	6 categories emerged	None reported	None reported	Purpose: Research Setting: 3 medical schools Participants: Medical students (senior) Feasibility: Train interviewer, coders
Robins Professionalism Issues Assessment (Robins et al., 2002)	Assesses perceptions of professionalism climate; self-administered questionnaire; qualitative	17 codes	None reported	None reported	Purpose: Education Setting: Medical school Participants: Medical students (2nd-yr.) Feasibility: Train coders
Scale to Measure Professional Attitudes and Behaviors in Medical Education (Arnold et al., 1998)	Assesses professional behavior in a given environment; self-administered questionnaire; 10-pt scale ("never" to "always")	12	Inter-item: (Cronbach's alpha) 0.71-0.75; Item to scale: 0.24-0.52	Face Concurrent Construct: Factor analysis	Purpose: Research Setting: 5 medical schools and centers Participants: Medical students, residents
Stern Value Code (Stern, 1996)	Assesses natural occurrence of behaviors from which values may be inferred; naturalistic observation and audiotapes by trained observers; qualitative	37 codes	Inter-rater: 0.95+	Content: Observations conducted at various times over 6 months Construct: Inferred from extent of agreement on interpretation of excerpts (0.11-0.91, Kappa)	Purpose: Education Setting: Medical center Participants: Residents and attendings who taught medical students internal medicine) Feasibility: Resources required to conduct observations and code data

Diversity-Affective

Crandall Attitudes toward Caring for the Medically Indigent Questionnaire (Crandall et al., 1993)	Assesses attitudes toward caring for the medically indigent; self-administered; 5 pt scale ("strongly disagree to strongly agree"), T/F	57	Inter-item: (Cronbach's alpha) 0.87-0.91	Construct: Factor analysis	Purpose: Research Setting: Medical school Participants: Medical students (1st & 4th-yr.)
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Cross-Cultural Adaptability Inventory (Majumdar et al., 1999)	Assesses potential for cross-cultural effectiveness; self-administered questionnaire; 6 pt scale ("definitely not true about me now" to "definitely true about me now")	50	Previously established Inter-item=0.9 (overall)	Construct: Previously established	Purpose: Education Setting: Ontario International Medical Graduate Program Participants: Foreign medical graduates
Cultural Competence in Medicine Questionnaire (Godkin & Savageau, 2001)	Assesses opinions and self-reported knowledge about cultural issues in medicine and community involvement; self-administered questionnaire; 4 pt scales ("not at all well/never" to "very well/often"), 5 pt scale ("strongly disagree" to "strongly agree")	43	Inter-item: (Cronbach's alpha) 0.85 for 2 subscales, reliability of other scales established in another study	Face Content: Expert review Construct: Discriminated between course participants and non-participants	Purpose: Education Setting: Medical school Participants: Medical students (1st & 2nd-yr.)
Dogra Attitudes Toward Cultural Issues Questionnaire (Dogra & Stretch, 2001)	Assesses attitudes toward cultural issues; self-administered questionnaire; 5 pt scale ("strongly disagree" to "strongly agree"), Y/N	46	None reported	Face	Purpose: Education Setting: Medical school (England) Participants: Medical students (2nd & 4th-yr.)
Elam Diversity in Medical School Questionnaire (Elam et al., 2001)	Assesses attitudes toward and perceptions of diversity in classrooms; self-administered questionnaire; 5 pt scales ("strongly disagree" to "strongly agree" and "never" to "always")	16	Inter-item: (Cronbach's alpha) 0.73	None reported	Purpose: Research Setting: 4 medical schools Participants: Medical students (1st-yr.)
O'Toole Attitudes toward Indigent Patients Questionnaire (O'Toole et al. 2002)	Assesses attitudes toward caring for indigent patients; self-administered questionnaire; 5 pt scale ("strongly disagree" to "strongly agree")	15	None reported	None reported	Purpose: Research Setting: Medical school Participants: Medical students (2nd & 4th-yr.)
Ramsey Multicultural Family and Community Medicine Curriculum Resident Self-Evaluation of Five Levels of Cultural Competence (Culhane-Pera et al., 1997)	Assesses extent to which cultural competence objectives met; self-administered questionnaire; 5-pt. scale ("not at all" to "excellent")	18	None reported	None reported	Purpose: Education Setting: Medical center Participants: Residents (family medicine)
Sociocultural Attitudes in Medicine Inventory (Tang et al., 2002)	Assesses student attitudes toward sociocultural issues in medicine; self-administered questionnaire; 5 pt scale ("strongly disagree" to "strongly agree")	26	Inter-item: (Cronbach's alpha) 0.83-0.87	Construct: Factor analysis, post-intervention improvement	Purpose: Education Setting: Medical school Participants: Medical students (2nd-yr.)

Diversity-Cognitive

Cultural Competence in Medicine Questionnaire (Godkin & Savageau, 2001)	Assesses opinions and self-reported knowledge about cultural issues in medicine and community involvement; self-administered questionnaire; 4 pt scales ("not at all well/never" to "very well/often"), 5- pt scale ("strongly disagree" to "strongly agree")	43	Inter-item: (Cronbach's alpha) 0.85 for 2 subscales, reliability of other scales established in another study	Face Content: Expert review Construct: Discriminated between course participants and non-participants	Purpose: Education Setting: Medical school Participants: Medical students (1st & 2nd-yr.)
University of Michigan Cultural Sensitivity Questionnaire (LoboPrabhu et al., 2000)	Assesses knowledge of cultural issues; self-administered questionnaire; MCQ, T/F, qualitative	10	None reported	Construct: Post-course improvement in performance	Purpose: Education Setting: Medical center Participants: Residents (psychiatry, all yrs.)

Diversity-Behavioral

Robins' Health Beliefs Communication OSCE (Robins et al., 2001)	Assesses cultural competence; data collected by SPs; checklist	10	Inter-item: (Cronbach's alpha) 0.61-0.83	Face Construct: factor analysis	Purpose: Education Setting: Medical school Participants: Medical students (4th-yr.) Feasibility: OSCEs are costly
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Diversity-Environmental

Elam Diversity in Medical School Questionnaire (Elam et al., 2001)	Assesses attitudes toward and perceptions of diversity in classrooms; self-administered questionnaire; 5 pt scales ("strongly disagree" to "strongly agree" and "never" to "always")	16	Inter-item: (Cronbach's alpha) 0.73	None reported	Purpose: Research Setting: 4 medical schools Participants: Medical students (1st-yr.)
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