



INSTITUTE ON MEDICINE
AS A PROFESSION

Professionalism among Physicians: Results of a National Survey

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Introduction

Professionalism has become a topic of growing fascination in medicine and other fields. This reflects increasing concern about the problems of social systems, and in medicine, about the failure of our health care system to meet expectations in the areas of cost, quality and equity. Analysts are coming to recognize that neither the market nor government – alone or in combination -- has the tools to make our health care system work as well as it can and should. The reasons are simple: consumers lack the information they need to function as fully informed purchasers in medical markets; health transactions are too numerous and complex to be effectively regulated. A third force is necessary to realize our collective aspirations. That force may be professionalism.

This report is a response to this recognition of the potential importance of physician professionalism in our daily health care lives. The report also reflects the hope that by finding a way to measure critical aspects of professionalism, we can help the physicians to embody more completely their own ideals. The result, we believe, can only be beneficial for both physicians and their patients.

The report proceeds in the following sections. First, we lay out the three critical domains of professionalism. We distill these from a broad sociological literature concerning what constitutes the essence of a profession. Second, we report the beliefs of physicians concerning these domains: do doctors believe that they should display the attributes that scholars have concluded are essential to professionalism? For the most part, we find, physicians do. Third, we report on how physicians themselves report they behave with respect to behaviors that embody and reflect professional attributes. The extent to which they report various behaviors varies with certain factors – physicians' age, gender, practice location, and even ethnicity. We dissect out some of these associations. Finally, we show the results of selected, straightforward multivariate analyses that probe more rigorously the effects of these factors on professional behaviors.

We do not draw conclusions. We leave that to readers. This is an exploratory project. We hope to improve it over time, even as we track the evolution of the profession in embodying society's and its own ideals.

Domains of Professionalism

Building on the previous published literature in the field we suggest a conceptual framework that consists of three broad domains upon which medicine rests: 1) Maintenance of professional competence; 2) Professional self regulation; and 3) Moral/ethical attributes. Each of these are discussed below.

Maintenance of Professional Competence: The profession of medicine is based upon a highly specialized body of knowledge that is rapidly changing. Recent evidence suggests that 50% of the knowledge a new physician has at completion of her or his medical training will be obsolete in 5 years. In order to keep pace with the ever advancing body of medical knowledge and skills doctors engage in continuing medical education (CME) classes, attend conferences, complete re-certification examinations and read professional journals. While many of these activities such as CME, are mandated and monitored by oversight organizations, some such as reading professional journals are voluntary and largely unmonitored. Regardless of the mechanism, the goal of maintaining professional competence is to ensure that physicians are aware of the most recent knowledge and skills and, when appropriate, incorporate those leanings into their practice to ensure that patients receive the best care possible.

Professional Self Regulation: The second domain of medicine is the concept of professional self-regulation. Self regulation represents a social contract between physicians and society that is designed to promote the competent, safe and ethical practice of physicians. The principle of self regulation is operationalized through a complex web of physician organizations, hospitals, government agencies and individual physicians acting in areas such as quality improvement, medical errors and issues related to impaired or incompetent physicians.

Moral/ethical Attributes. The third domain of medical professionalism relates to a set of moral or ethical attributes and behaviors to which physicians are expected to ascribe and adhere. While there are various names to describe this set of moral/ethical attributes such as a "Code of Ethics" or "Professional Standards" areas of interest often involve honesty, relationships with patients, confidentiality, business practices, conflicts of interest, patient autonomy and the allocation of medical resources. These moral/ethical attributes are often formalized in written documents and policies of professional organizations, hospitals and physician groups. At the same time these moral/ethical attributes are ingrained into medical training through the formal and informal curriculum of medical schools and teaching hospitals

Professionalism Domains

- Maintenance of technical competence
 - Certification/re-certification
 - CME
 - Computer literacy
 - Ability to critically assess new clinical information
- Collegial self-regulation
 - Peer supervision
 - Quality improvement
 - Error reporting
- Moral and ethical attributes
 - Resolution of conflict of interest
 - Conservation of limited medical resources
 - Community involvement

Methods

- Sampling
- Survey design and testing
- Survey administration
- Analyses
- Domain measures

Sample

The sample for this study was developed in a multi-step process. From the master file of the American Medical Association we selected all physicians in the 50 states in three primary care specialties (Internal Medicine, Family Practice, Pediatrics) and three non-primary care specialties (Cardiology, General Surgery and Anesthesiology). From this list we excluded all doctors of osteopathy, resident physicians and physicians in military hospitals. In addition, we excluded physicians that had no address in the AMA database and those who specifically requested that they not be contacted by mail using the AMA data and those who were retired. From this list of 271,148 physicians we randomly selected a total of 3,504 physicians distributed equally among the 6 specialties.

Survey Design

The design of the survey instrument was informed by a focus group of eight physicians and four semi-structured interviews conducted in Princeton, NJ. Once completed the survey instrument was pre-tested using four additional cognitive interviews conducted by professional interviewers at Mathematica. The final survey instrument was approved by the IRB at the Massachusetts General Hospital.

Survey Administration and Response Rates:

The survey was administered by priority mail by Mathematica Policy Research between November 2003 and June of 2004. Sampled physicians were sent a survey instrument, a cover letter, a fact sheet describing the study, a postage-paid return post card, a postage-paid return envelope, and a pre-paid incentive check for \$ 20. The sampled physicians were asked to complete the survey and mail the postcard back to Mathematica separately from the completed survey instrument. This procedure enabled us to track non-respondents via the postcard while ensuring the respondent's complete anonymity since the instrument had no unique identification information. Non-respondents were contacted via mail and telephone and were encouraged to participate. Of the 3,504 subjects, nearly 10% (9.6%) (337 total physicians) were considered ineligible because they were no longer providing direct patient care, reported as deceased, unavailable and/or out of the country, not a physician or practiced in a non-sampled specialty, did not speak English, or on maternity leave. Of the remaining 3,167 eligible sampled physicians, 1,662 returned a completed questionnaire yielding an overall weighted response rate of 57.8% The response rate differed by subject specialty from a low of 42.6% among cardiologists to a high of 65.8% among pediatricians.

Analyses:

The data were analyzed using standard statistical techniques. In the univariate analyses we examined the distributions of the variables to ensure that the variables were correctly constructed, that missing values are correctly assigned, and that there are sufficient numbers of respondents to support the planned analyses. In bivariate analyses we examined. Bivariate analyses examined the direction and significance of relationships between variables. In the multivariate analyses we conducted logistic regression analyses since the primary outcome variables of interest are dichotomous in nature. Results are unweighted.

Domain Measures

- For each domain:
 - Attitudes
 - Self reported behaviors
 - Self reported capacity
- Scenarios
 - Probe areas of ambiguity/conflict between domains

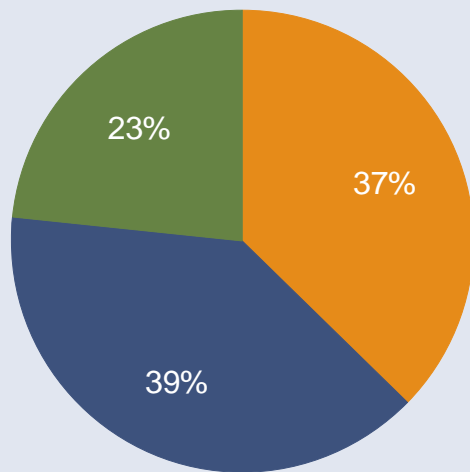
Results

- Bivariate Results
 - Professionalism Beliefs
 - Professionalism Behaviors
 - Moral attributes
- Multivariate Results (selected)
 - Willingness to order an unnecessary MRI
 - Use of computerized decision support
 - Preparedness to evaluate new clinical knowledge

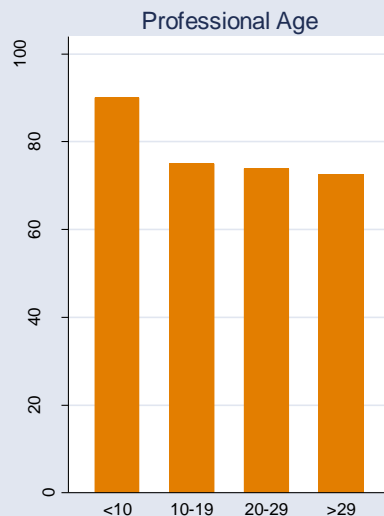
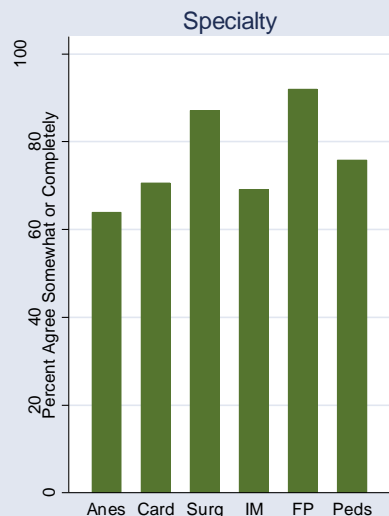
Professionalism Beliefs

- **Maintain Technical Competence**
 - Willingness to undergo re-certification
- **Professional Self-Regulation**
 - Reporting of medical errors
 - Reporting of impaired/incompetent colleagues
- **Moral/Ethical Attributes**
 - Minimize disparities in care due to race and ethnicity
 - Provision of necessary care regardless of ability to pay
 - Importance of various issues for physicians

Beliefs: Physicians should be willing to undergo recertification



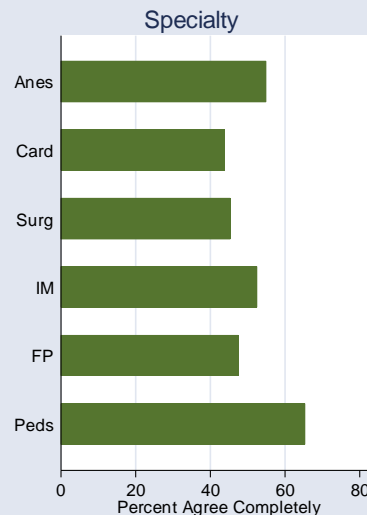
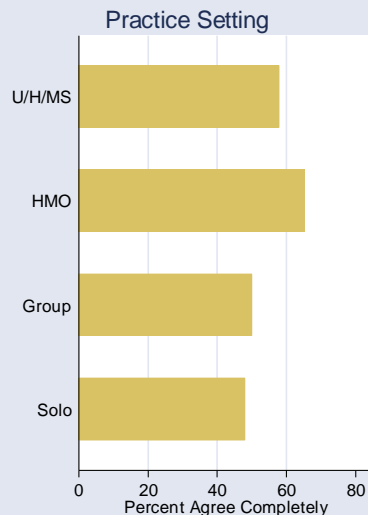
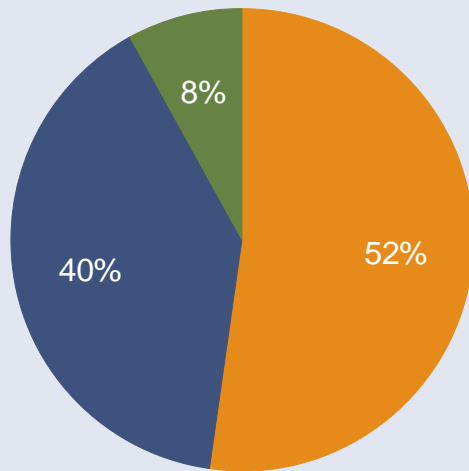
Agree Completely Agree Somewhat Disagree



- More than three quarters (76%) of respondents agreed somewhat or completely that physicians should undergo recertification periodically throughout their career.

- The strongest level of agreement for periodical re-certification of physicians was found among surgeons (87%), family practitioners (92%) and among physicians who have been in practice less than 10 years (90%).

Beliefs: Physicians should report all significant medical errors

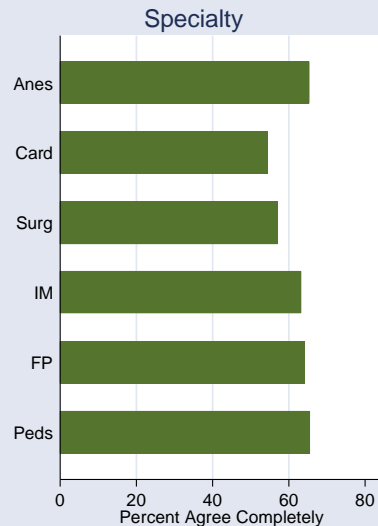
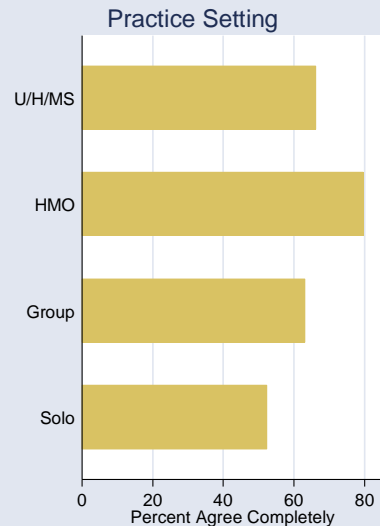
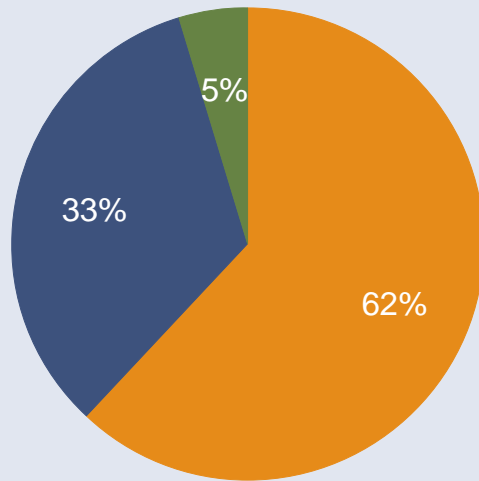


- Virtually all physicians (92%) agreed somewhat or completely that physicians should report all significant medical errors they observe to their hospital, clinic and/or other relevant authorities.

- Physician practice setting and specialty was significantly associated with beliefs about error reporting. The strongest support for reporting all significant errors was found among physicians in HMOs (65% who completely agreed) and academic settings (58% who completely agreed).

- Cardiologists and surgeons were least likely to completely agree that physicians should report all significant medical errors they observe (44% and 45% respectively).

Beliefs: Physicians should report all impaired or incompetent colleagues

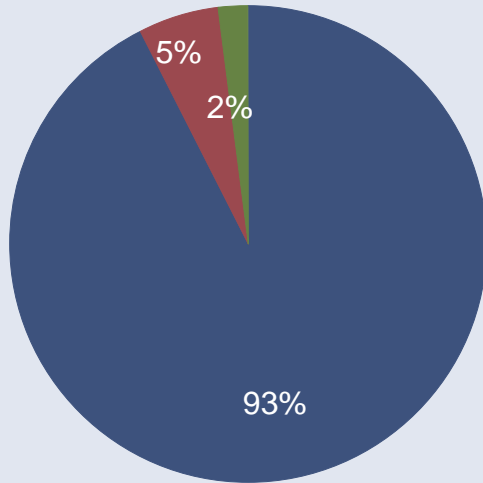


- Virtually all physicians (95%) agreed somewhat or completely that physicians should report all impaired or incompetent physicians to their hospital, clinic or other relevant authorities.

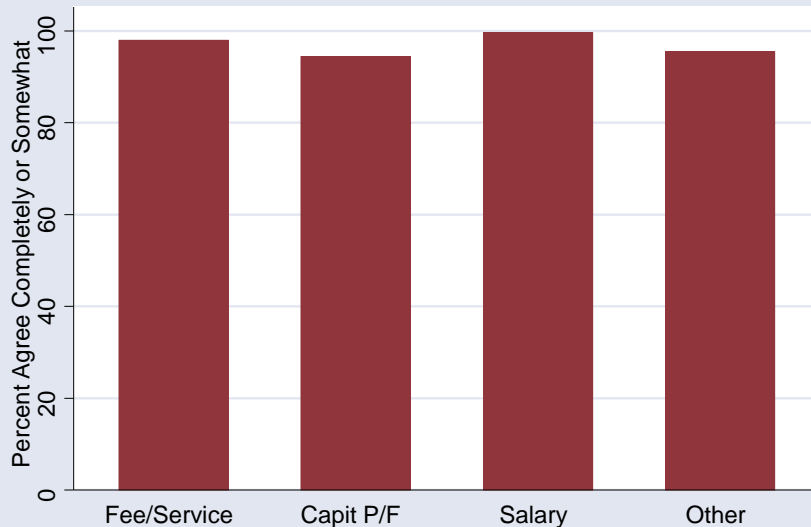
- The lowest levels of complete agreement for the reporting of impaired or incompetent colleagues were found among physicians in solo practice (52%). The highest rates were found among those in HMOs (80%).

- Surgeons and cardiologists were least likely to completely agree that physicians should report all impaired or incompetent colleagues (57% and 54% respectively).

Beliefs: Physicians should minimize racial and gender disparities in medical care



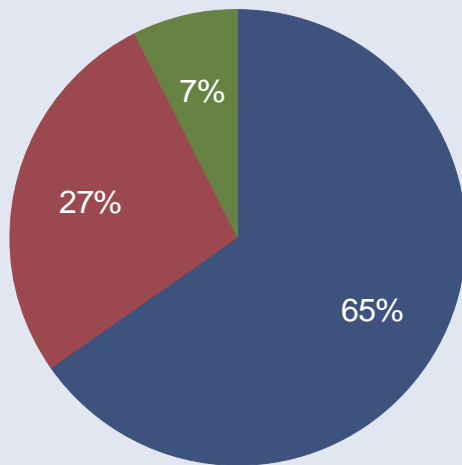
Reimbursement Mechanism



- Virtually all physicians (98%) agreed somewhat or completely that physicians should minimize disparities in care due to patients' race and gender.

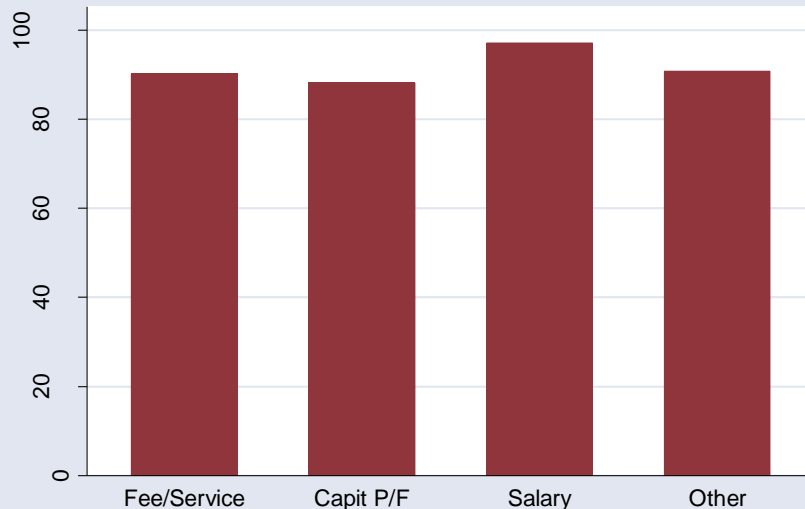
- Physicians who were at risk for the costs of care they provide under capitation agreements were less likely than salaried physicians to have agreed somewhat or completely that physicians should minimize disparities in medical care due to patients' race and gender (94% v. 99%).

Beliefs: Physicians should provide necessary care regardless of ability to pay



■ Agree Completely ■ Agree Somewhat ■ Disagree

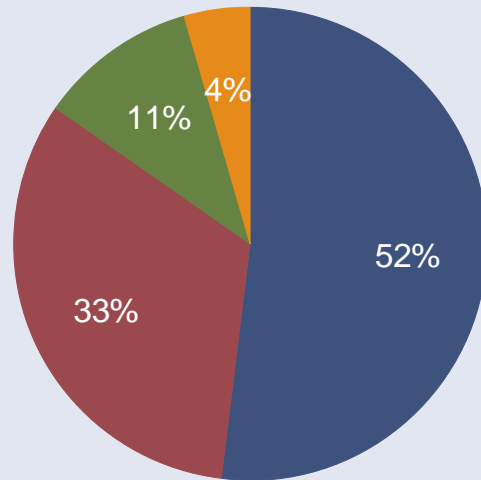
Reimbursement Mechanism



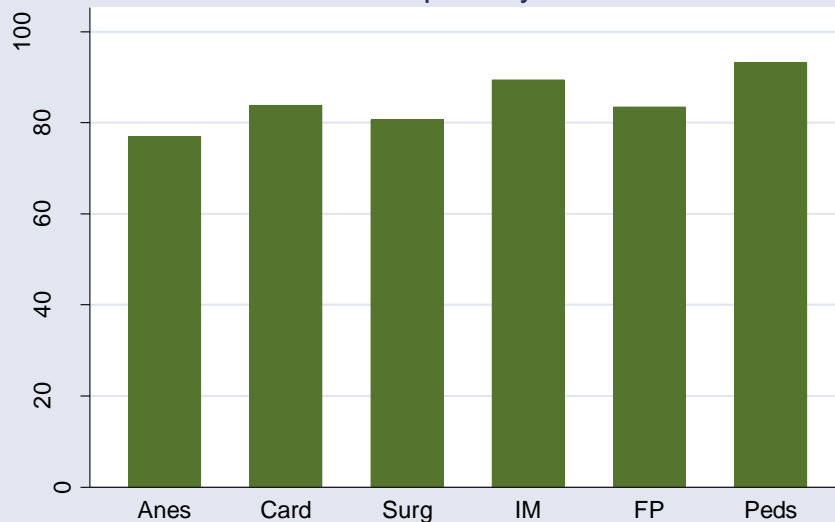
- Virtually all physicians (93%) agreed somewhat or completely that physicians should provide necessary care regardless of the patient's ability to pay.

- Physicians who were at risk for the costs of care they provide under capitation agreements were less likely than salaried physicians to agree somewhat or completely that physicians should provide necessary care regardless of patient's ability to pay (88% v 97%).

Beliefs: Importance of advocating for health insurance for the uninsured



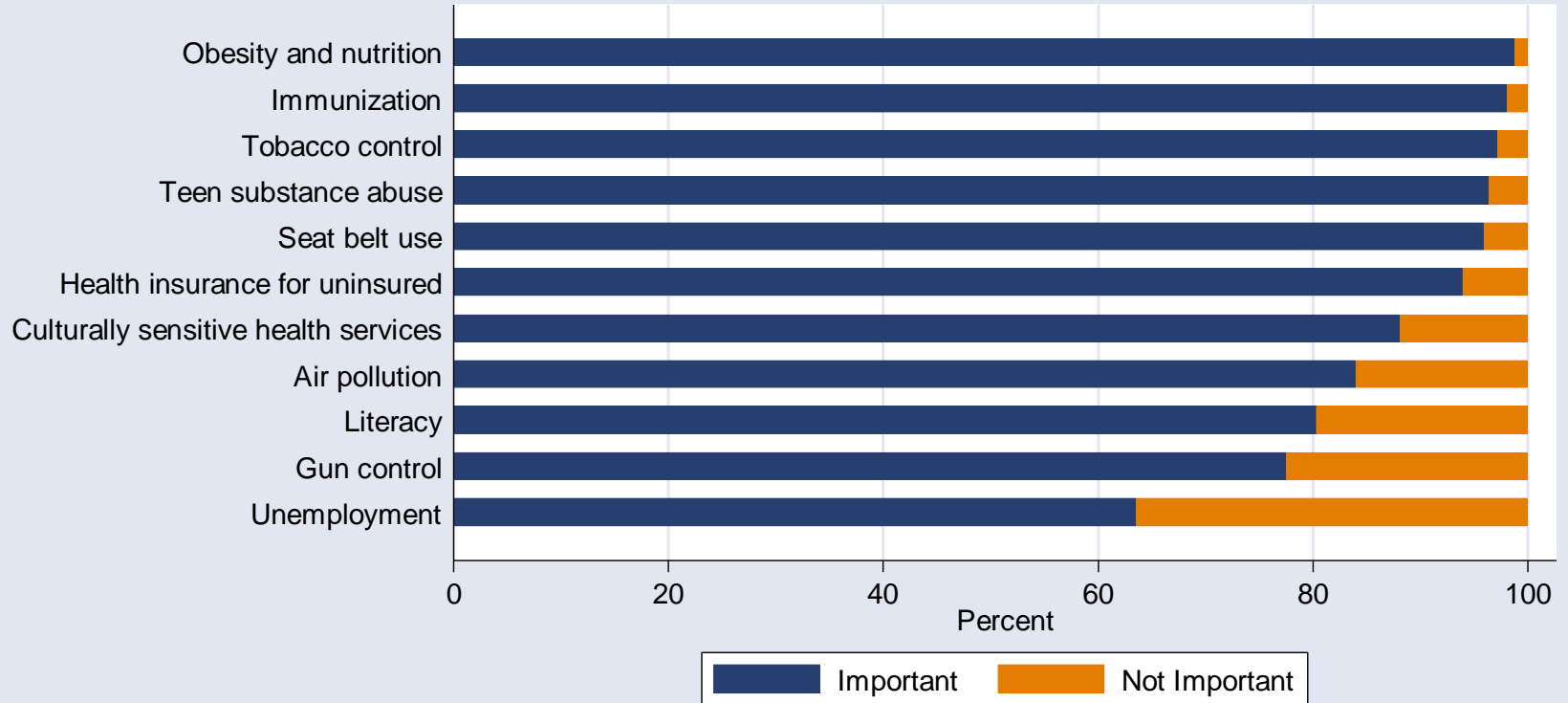
Specialty



- Eighty five percent of physicians believed it is somewhat or very important for physicians to advocate individually or collectively for health insurance for the uninsured.

- Anesthesiologists were significantly less likely than pediatricians to believe it is important for physicians to advocate individually or collectively for health insurance for the uninsured (77% v. 93% respectively).

Beliefs: Importance of Advocacy for Specific Issues



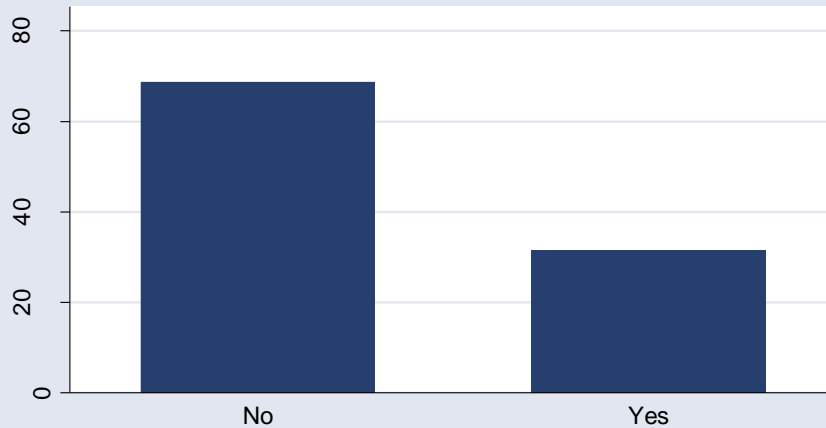
- More than 60% of all physicians felt it was important for physicians to advocate individually or collectively for each of the above issues.
- Obesity control, immunization and tobacco control had the highest level of support for physician advocacy while unemployment, gun control and literacy had the lowest levels of support for physician advocacy.

Professionalism Behaviors

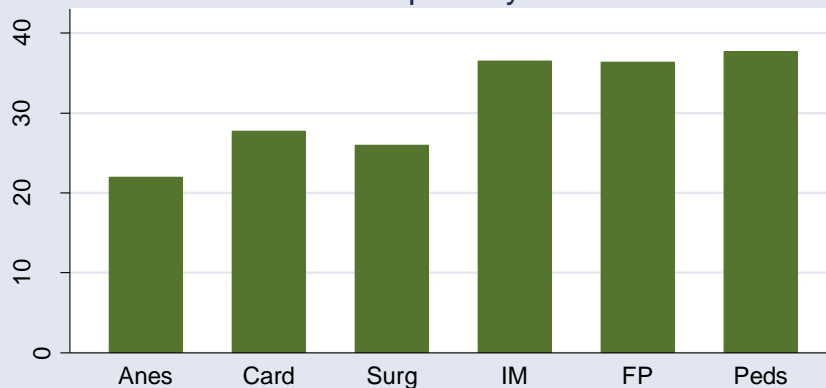
- Maintenance of Competence
 - Underwent competency assessment
 - Use of computers
 - Preparedness to evaluate new clinical knowledge

Behaviors: Maintenance of Competence

Underwent competency assessment by provider organization or health plan in past 3 years

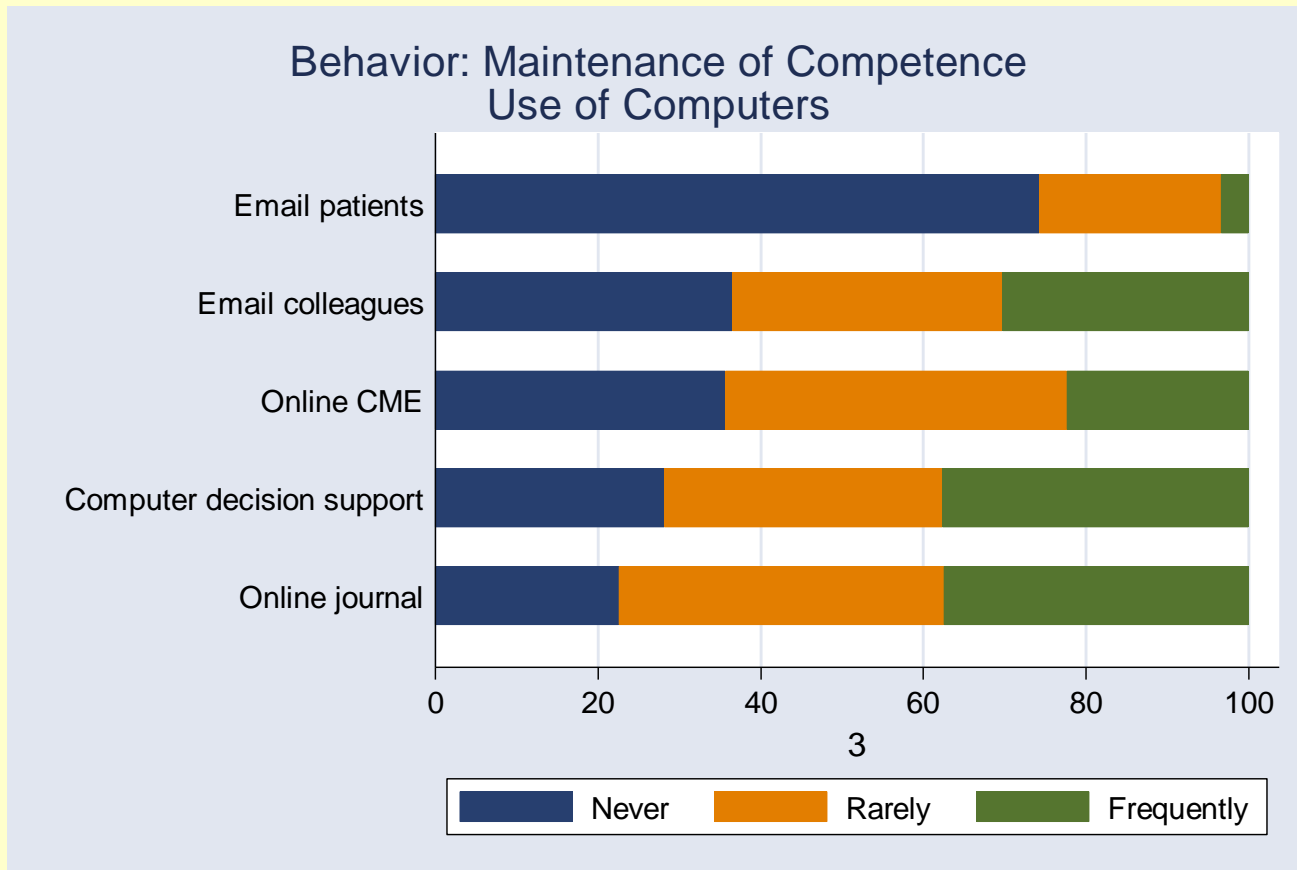


Specialty



- Slightly less than a third of physicians (31%) had undergone competency assessment in the last three years.

- Primary care physicians (internists, family practitioners and pediatricians) were more likely than specialists (anesthesiologists, cardiologists and surgeons) to have undergone competency assessment by a provider organization or a health plan in the last three years.

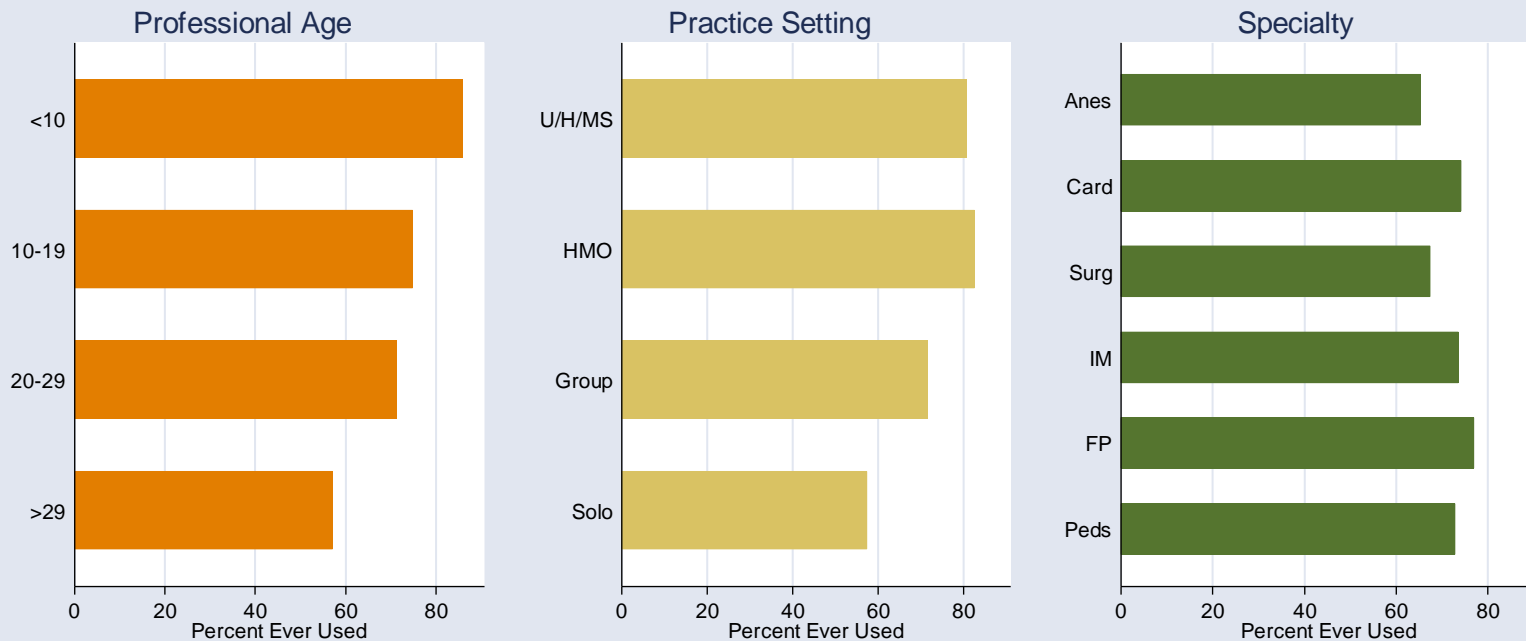


- The most frequent use of computers by physicians was related to reading online journals (38%), followed by using computer decision tools in the real-time management of patients, (38%) completing CME online (22%), emailing colleagues (30%) and communicating with patients via email (3%).

- More than 2/3rds of physicians have never communicated with patients via email.

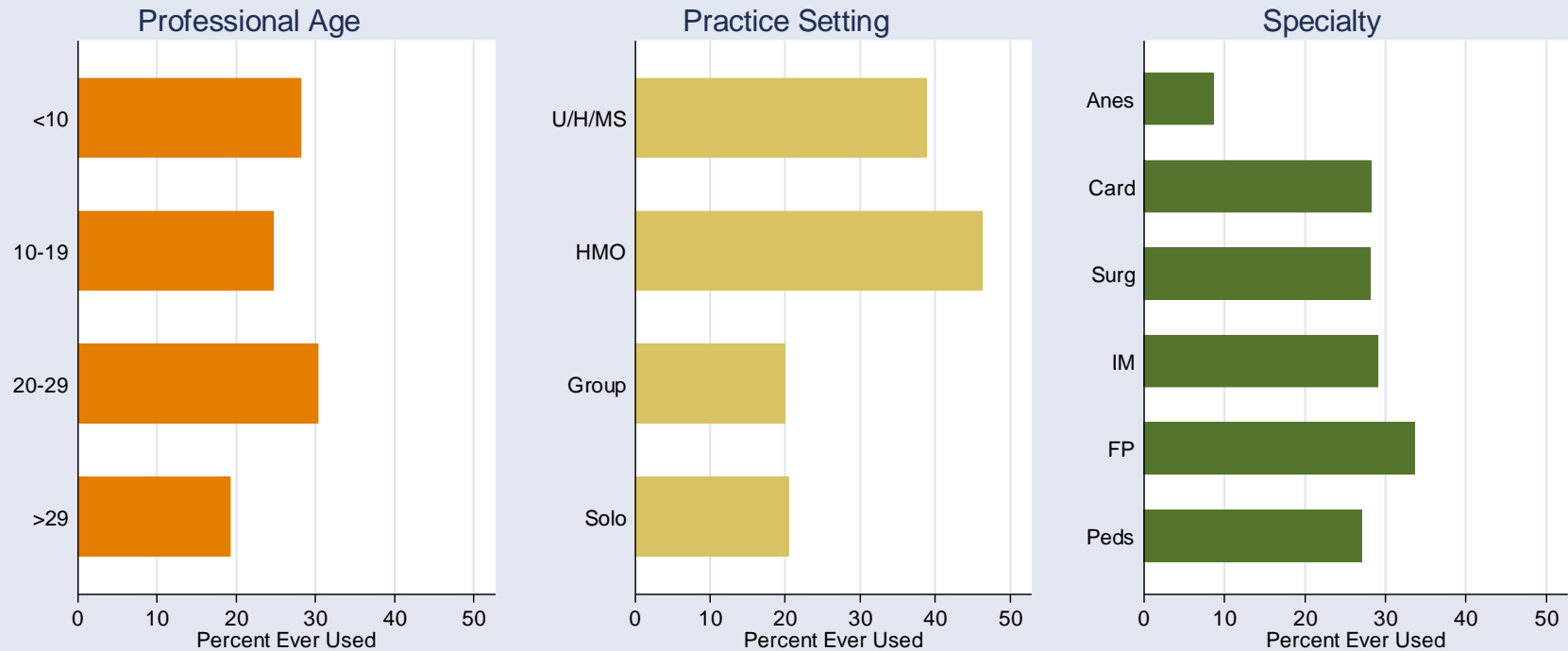
Behaviors: Maintenance of Competence

Use computerized decision support tools in realtime management of patients



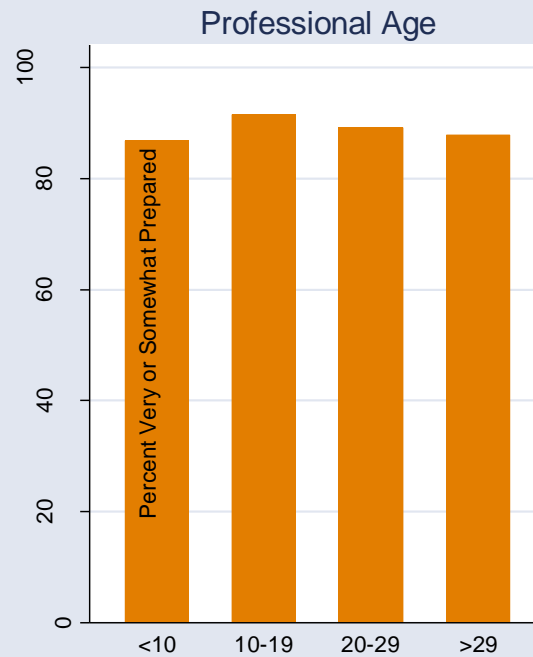
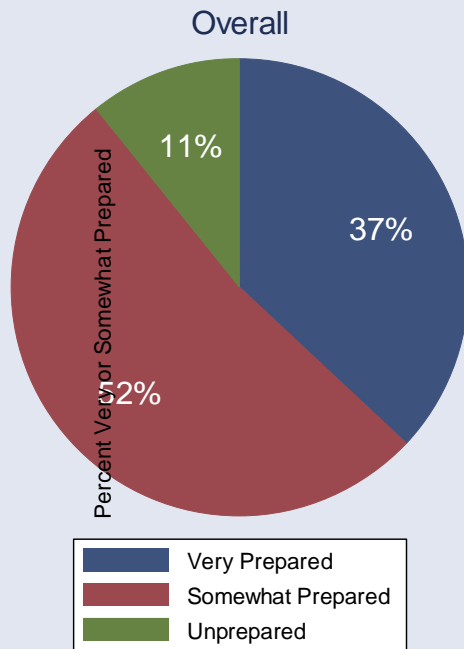
- Young physicians, those in HMOs and family practitioners were most likely to have ever used computerized decision support tools in the real-time management of patients at least once during their career.
- Physicians in practice more than 30 years, those in solo practice and surgeons were least likely to have ever used computerized decision support tools in the real-time management of patients.

Behaviors: Maintenance of Competence Use email to communicate with patients



- Physicians in university hospitals/medical schools and family practitioners were most likely to have ever used email to communicate with patients (39% and 34% respectively).
- Physicians in practice for thirty or more years, solo practitioners and anesthesiologists were least likely to have ever used email to communicate with patients (19%, 20% and 9% respectively).

Behaviors: Maintenance of Competence Preparation to evaluate new clinical knowledge

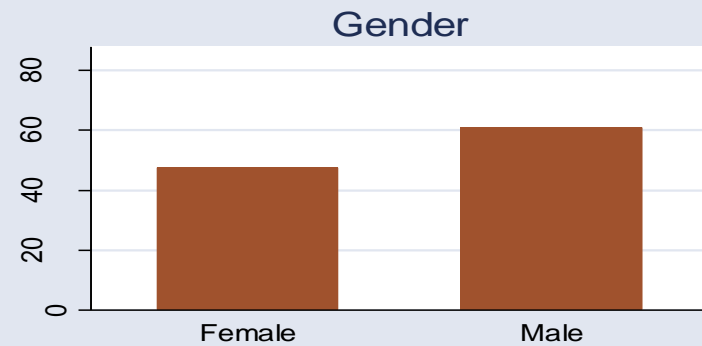
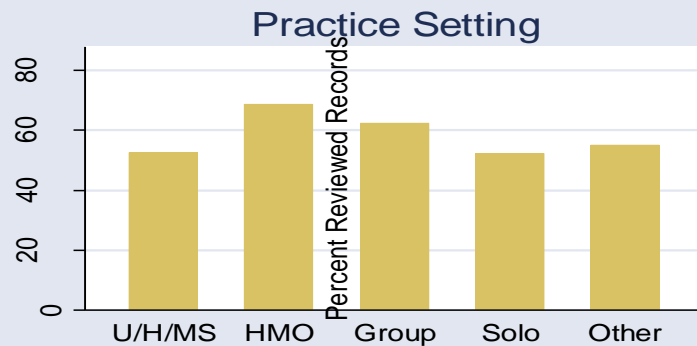
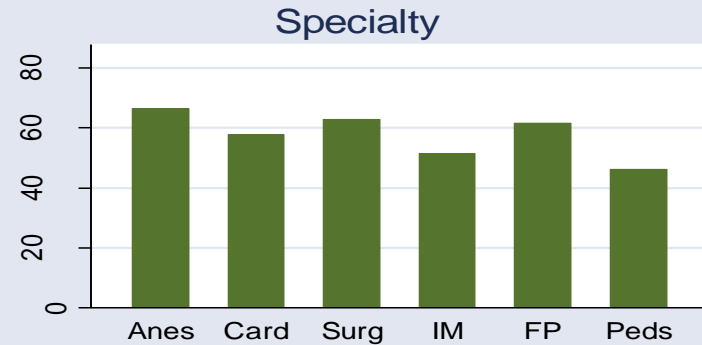
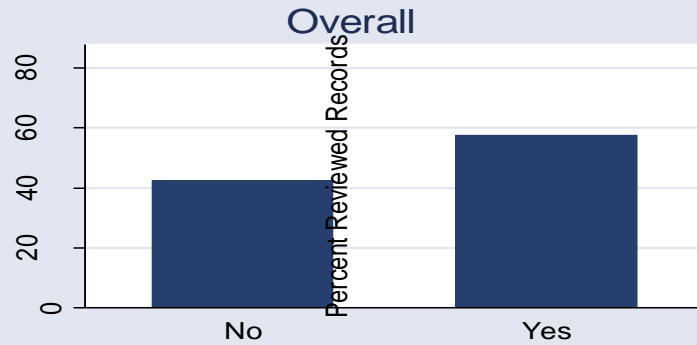


- Overall 89% of physicians felt somewhat or very prepared to evaluate new clinical knowledge.
- Physicians in practice less than 10 years were significantly less likely than physicians in practice between 10 and 19 years to be very or somewhat prepared to evaluate new clinical knowledge (87% v. 91%).
- 88% of internists, 84% of family practitioners and 85% of pediatricians felt somewhat or very prepared to evaluate new clinical knowledge compared to 93% of anesthesiologists, 95% of cardiologists and 91% of surgeons.

Professionalism Behaviors

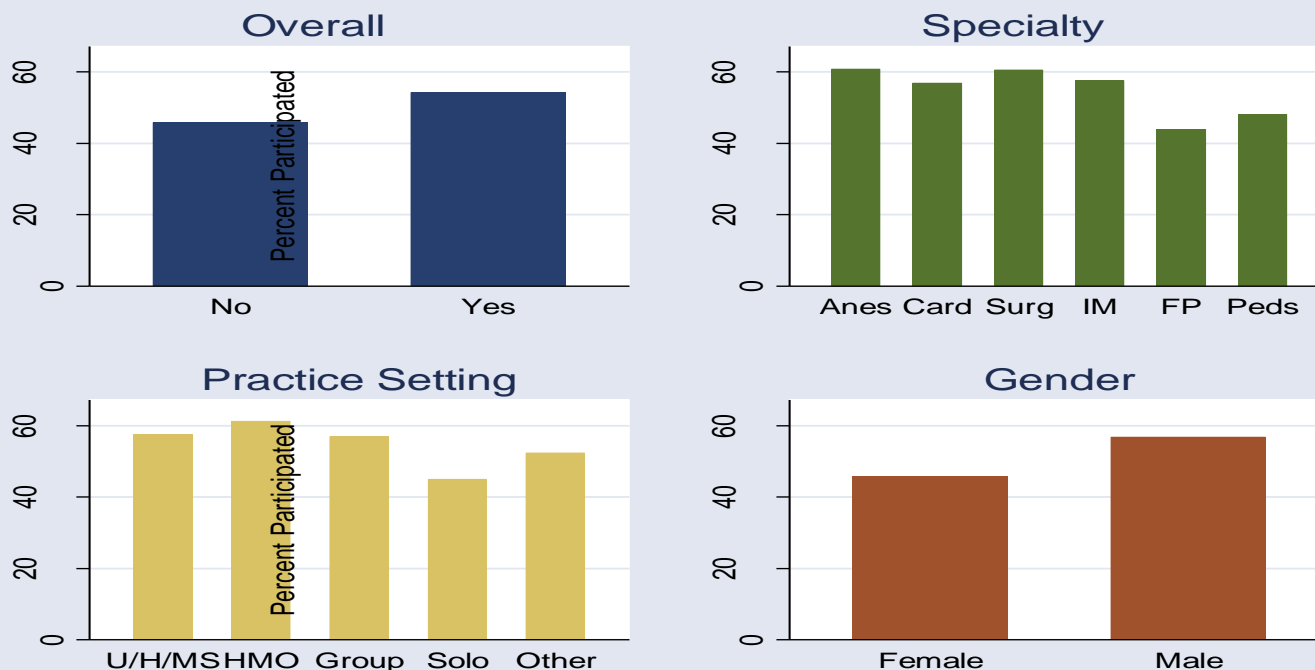
- Professional Self-regulation
 - Participation in review of other physicians records for QI
 - Participation in error reduction initiative
 - Practices regarding incompetent/impaired colleagues
 - Practices regarding medical errors

Behaviors: Professional Self-Regulation Reviewed other physician's records for QI in past 3 years



- Slightly more than half of physicians (58%) have reviewed another physician's records for quality improvement in the last three years.
- In terms of specialty, pediatricians were least likely to have reviewed other physician's records for quality improvement reasons in the last three years (46%). Anesthesiologists were most likely to have reviewed other physician's records for quality improvement reasons in the last three years (66%).
- Females were less likely than males to have reviewed another physician's records for quality improvement reasons in the last three years (47% v. 61%).

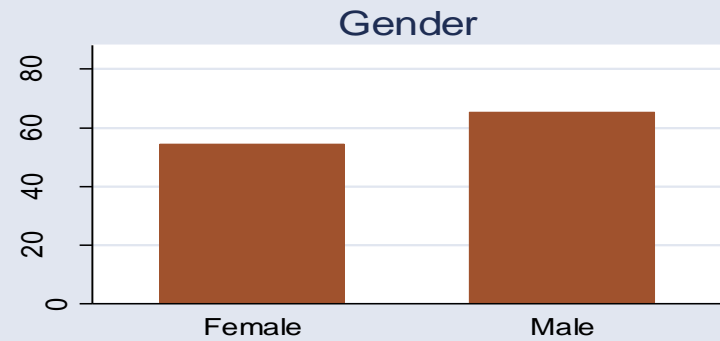
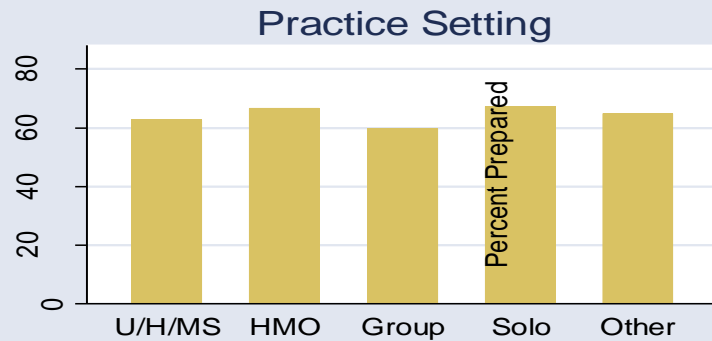
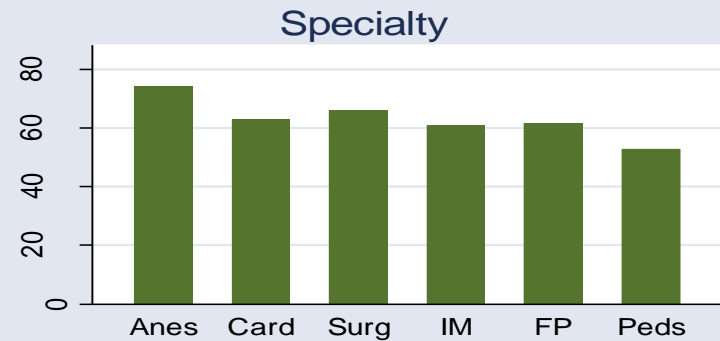
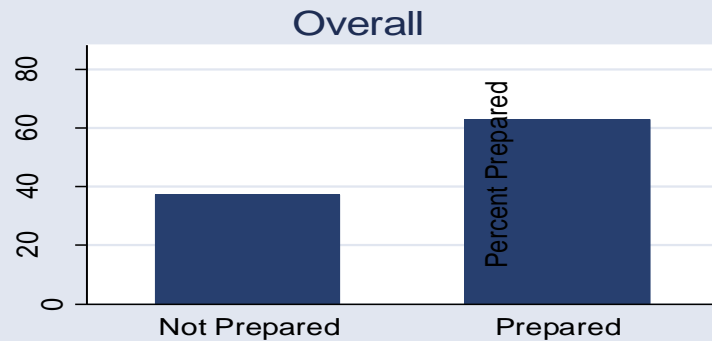
Behaviors: Professional Self-Regulation Participated in formal error reduction initiative in past 3 years



- Slightly more than half of physicians (54%) have participated in a formal medical error reduction initiative in their office, clinic, hospital or other health care setting in the last 3 years.
- Family practitioners, physicians in solo practice and females were least likely to have participated in a formal medical error reduction initiative in their office, clinic, hospital or other health care setting in the last 3 years (44%, 45%, and 46% respectively).
- Anesthesiologists, physicians in HMOs and males were most likely to have participated in a formal medical error reduction initiative in their office, clinic, hospital or other health care setting in the last 3 years (61%, 61%, and 57% respectively).

Behaviors: Professional Self-Regulation

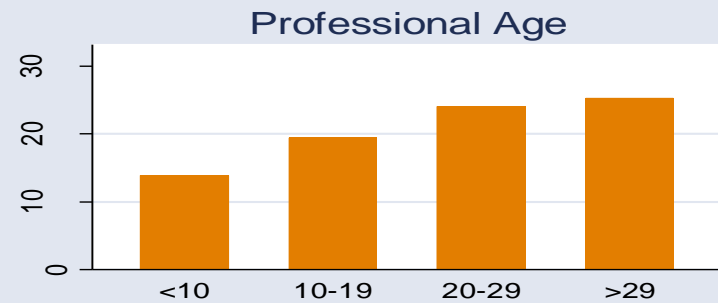
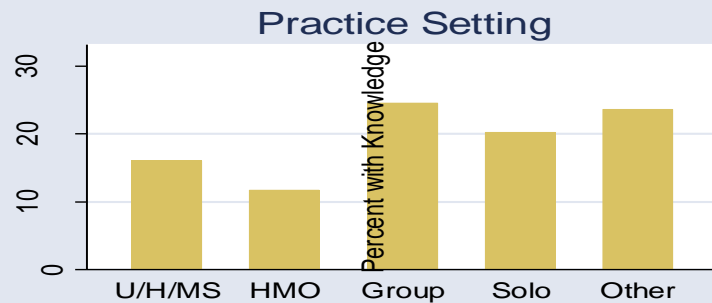
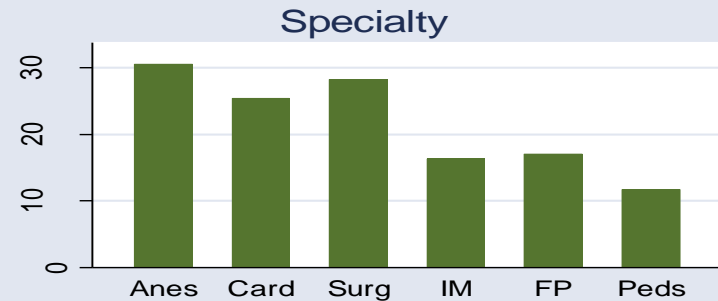
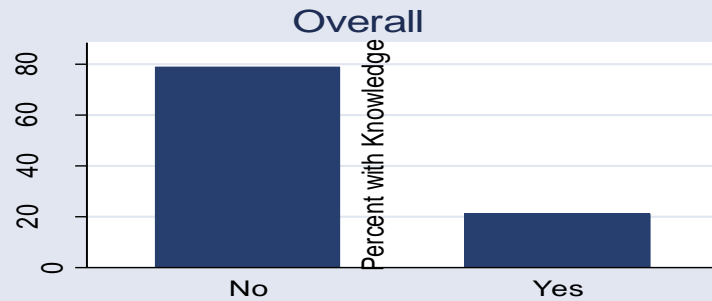
Feel prepared to deal with impaired or incompetent colleagues



- 63% of physicians felt somewhat or very prepared to deal with impaired or incompetent colleagues.
- Anesthesiologists were more likely than pediatricians to feel prepared to deal with impaired or incompetent colleagues (74% v 53%).
- Physicians in group practices were significantly less likely to feel prepared to deal with impaired or incompetent colleagues than in HMOs (60% v 67%).
- Males were significantly more likely than females to feel prepared to deal with impaired or incompetent colleagues (65% v 54%).

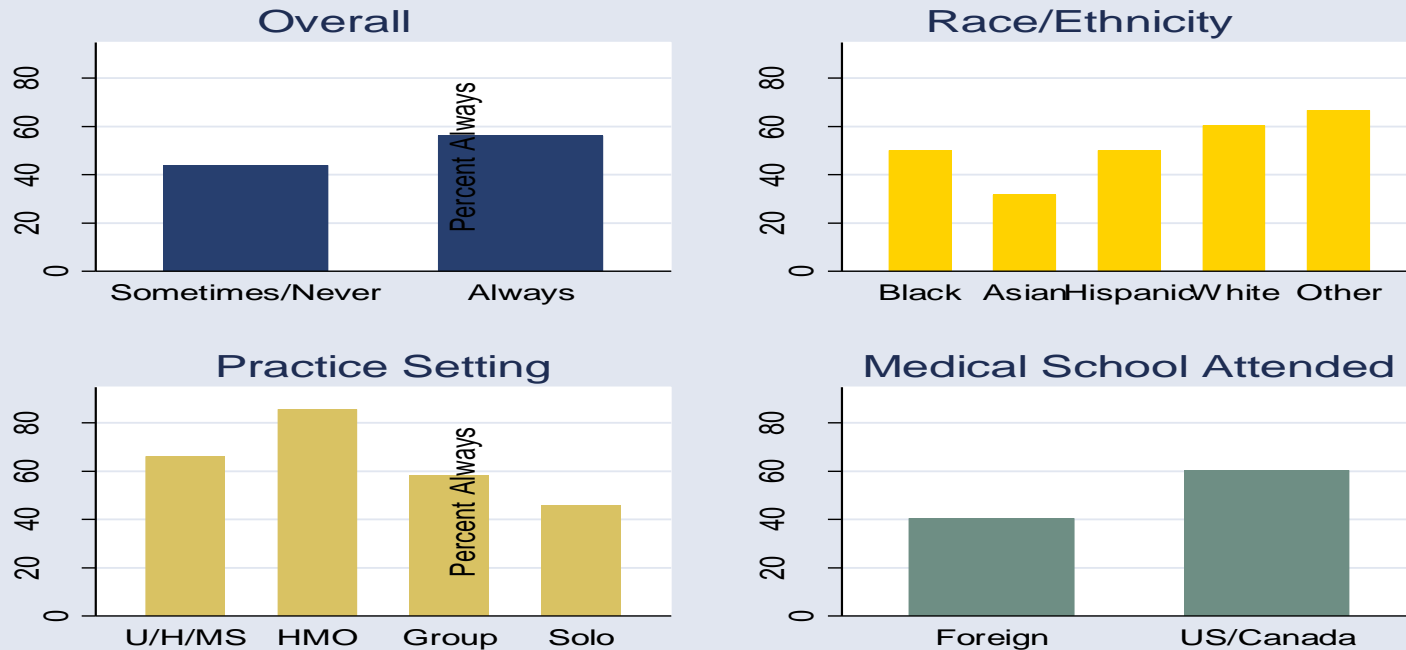
Behaviors: Professional Self-Regulation

Had personal knowledge of impaired or incompetent physician in own practice



- Slightly less than a quarter (21%) of physicians had direct personal knowledge of a physician who was impaired or incompetent in their hospital, practice or group.
- Internists, family practitioners and pediatricians (16%, 17%, and 12% respectively) were less likely than anesthesiologists, cardiologists and surgeons (31%, 25%, and 28% respectively) to have had direct personal knowledge of a physician who was impaired or incompetent in their hospital, practice or group.
- Physicians in HMOs and those with less than 10 years of practice were least likely to have had direct personal knowledge of a physician who was impaired or incompetent in their hospital, practice or group.

Behaviors: Professional Self-Regulation How often reported impaired or incompetent physician to relevant authority

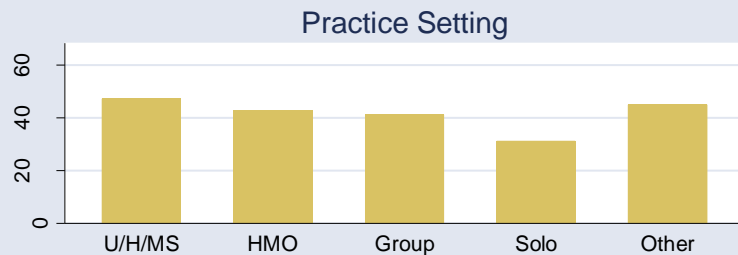
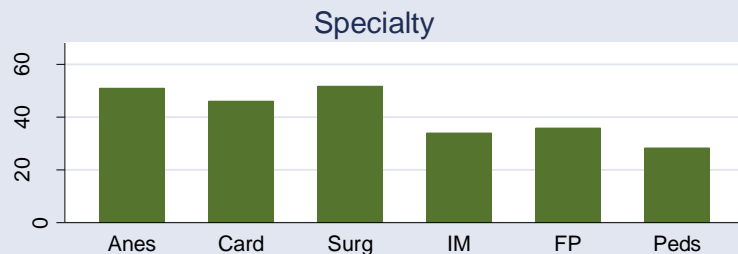
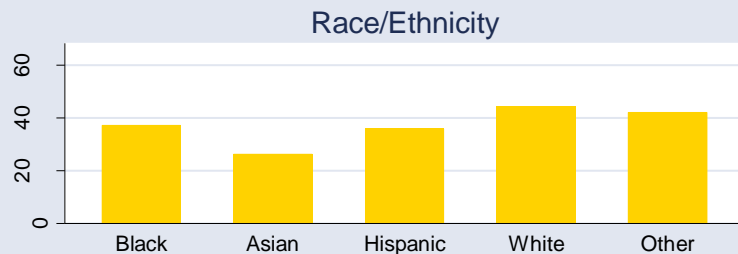
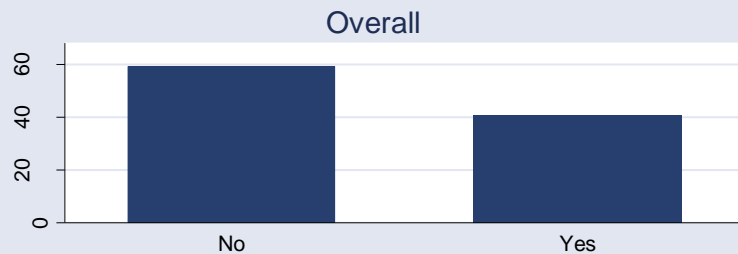


•21% of respondents who had direct personal knowledge of an impaired or incompetent colleague (see previous slide):

- More than half (56 %) always reported the individual to the relevant authority.
- Asian physicians were least likely to always report the impaired or incompetent physician (32%).
- Physicians in solo practice were least likely to always report the impaired or incompetent physician (46%).
- Foreign medical graduates were less likely than USMGs to always report the impaired or incompetent physician (41% vs. 60% respectively).

Behaviors: Professional Self-Regulation

Had knowledge of serious medical error in own practice



- 40% of physicians had knowledge of a serious medical error in their hospital, group or practice at least once in the last three years.

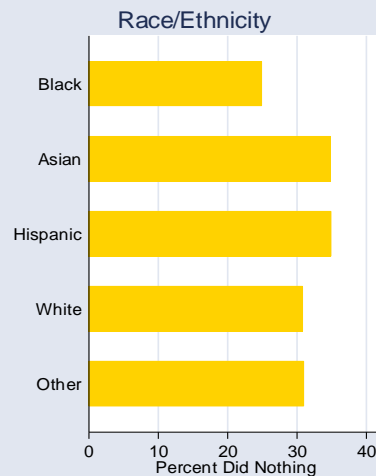
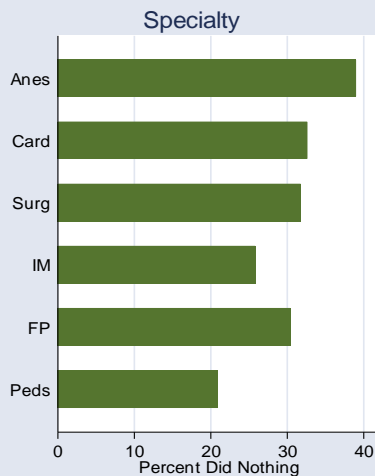
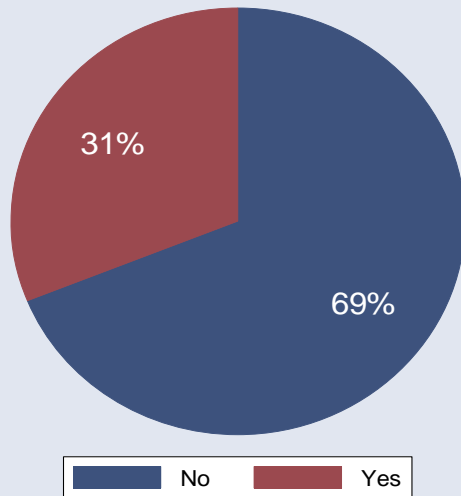
- Asian physicians were significantly less likely than others to have had knowledge of a serious medical error in the last 3 years.

- Primary care physicians (internists, family practitioners and pediatricians) were less likely to know of serious medical errors hospital, group or practice in the last three years than were specialists (anesthesiologists, cardiologists and surgeons)

- Physicians in university hospitals and medical schools were most likely to have knowledge of serious medical errors than physicians in other practice settings.

Behaviors: Professional Self-Regulation

Did nothing regarding serious medical error in practice in at least one instance



- Among the 40% of physicians who knew of a serious medical error in their hospital group or practice 31% did nothing about the error in at least one instance.

- More than a third of anesthesiologists, cardiologists and surgeons knew of a serious medical error in their hospital group or practice did nothing about it.

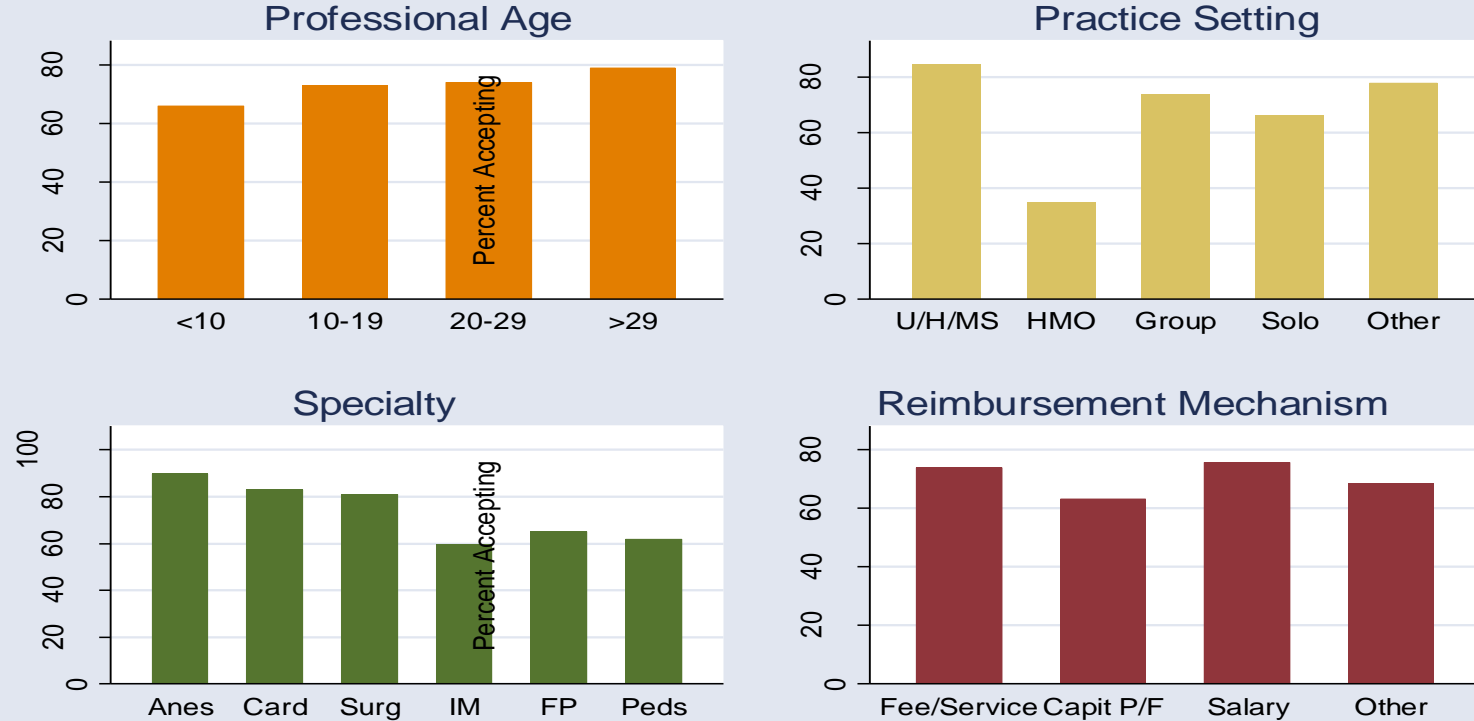
- Asian physicians were most likely to report that they did nothing about a serious medical error they knew about in the last three years.

Professionalism Moral Attributes

- Providing free care
- Financial conflict of interest
- Industry relationships
- Community service
- Managing costs of care

Behaviors: Moral Attributes--Providing free care

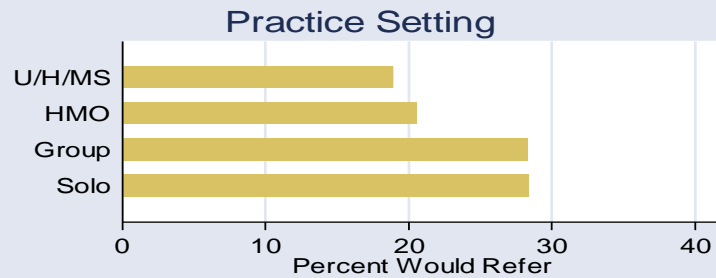
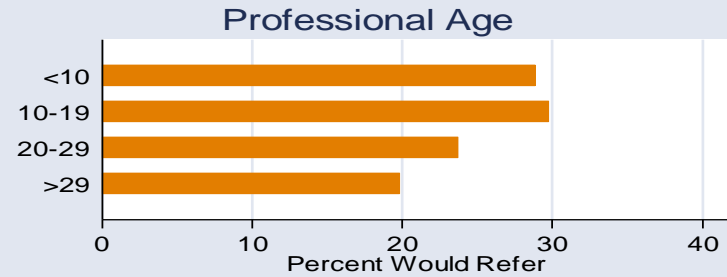
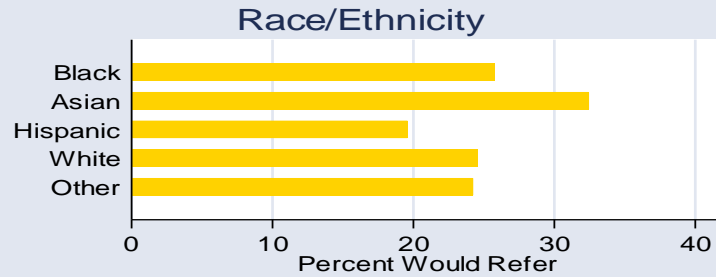
Currently accepting new uninsured patients unable to pay



- Two thirds (66%) of physicians who have been in practice less than 10 years were accepting new uninsured patients who are unable to pay for the care they receive compared to 80% of physicians in practice for at least 30 years.
- Physicians in HMOs significantly less likely than physicians practicing other settings to be accepting new uninsured patients who are unable to pay for the care they receive.
- Primary care physicians were less likely than specialists to be accepting new uninsured patients who are unable to pay.

Behaviors: Moral Attributes--Hypothetical Scenario

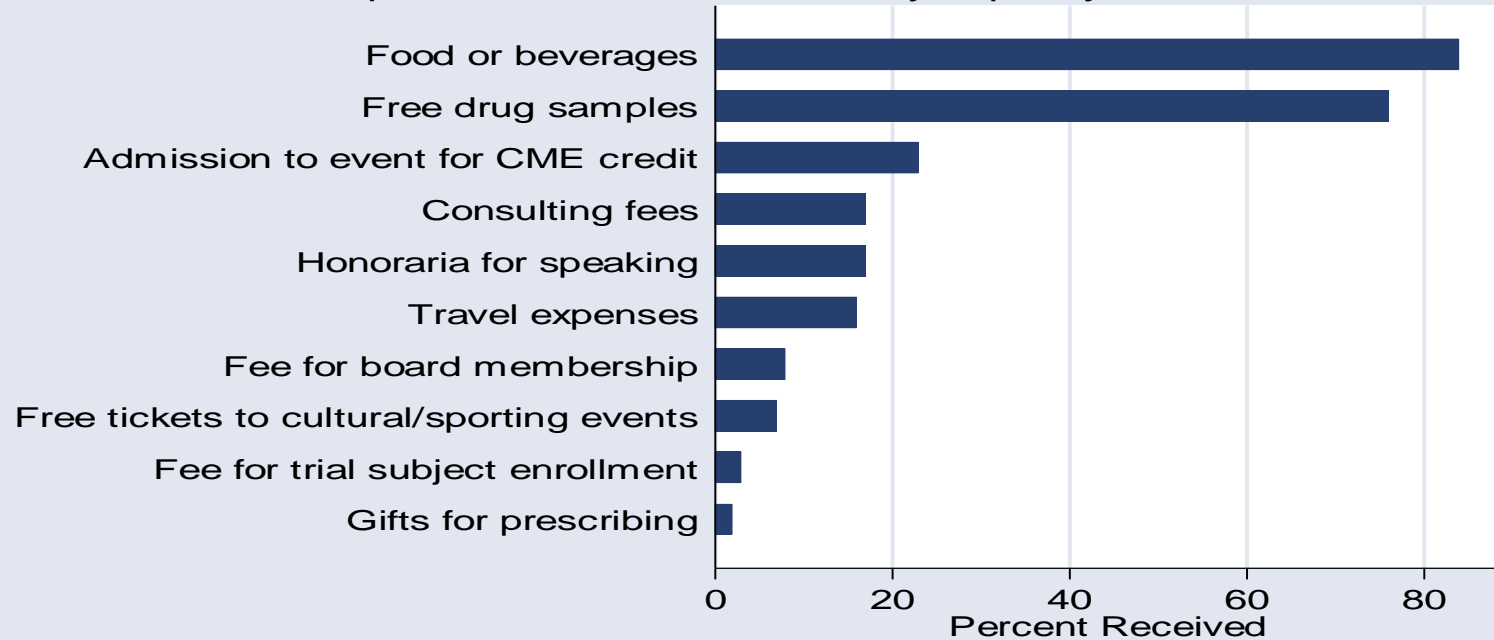
If you invested in an imaging facility, would you refer your patients to it without informing them of your investment?



- 26% of physicians were willing to refer patients to an imaging facility in which they held equity without informing the patient of their investments.
- Asian physicians were most willing to refer patients to an imaging facility in which they held equity without informing the patient of their investments (32%). Hispanic physicians were least willing to do so (20%).
- Physicians in practice 30 or more years were least willing to refer patients to an imaging facility in which they held equity without informing the patient of their investments (20%).
- Among the specialties, cardiologists were most willing to refer patients to an imaging facility in which they held equity without informing the patient of their investments (36%). Internists were least willing to do so (20%).

Behaviors: Relations with Industry

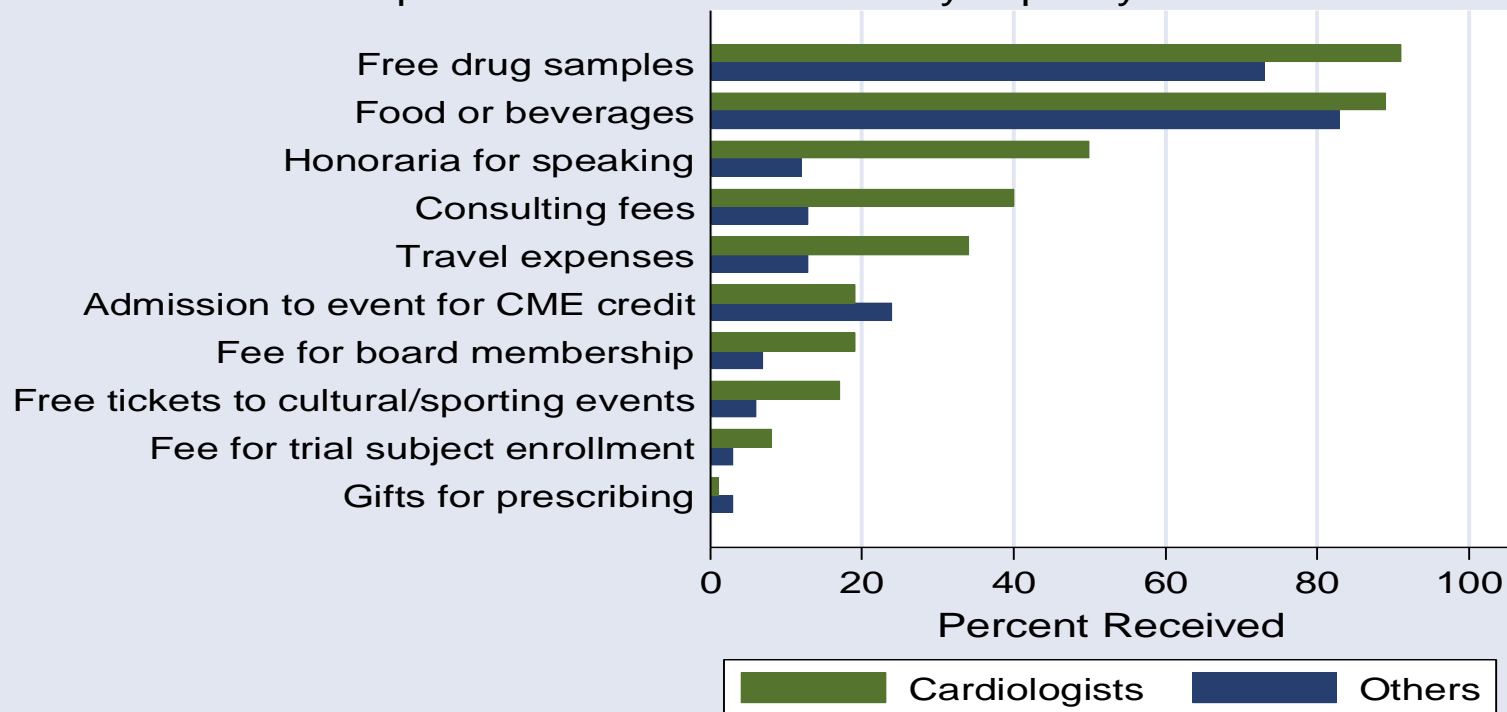
Receipt of incentives from industry in past year



•Physicians most commonly received refreshments from industry (84%) followed by drug samples (76%), admission to CME events(23%), consulting fees (17%), honoraria for speaking (17%), expenses for travel (16%), payment for service on a board (8%), tickets to cultural/sporting events (7%), payments in excess of costs for enrolling patients in clinical trials (3%) and gifts for prescribing (2%).

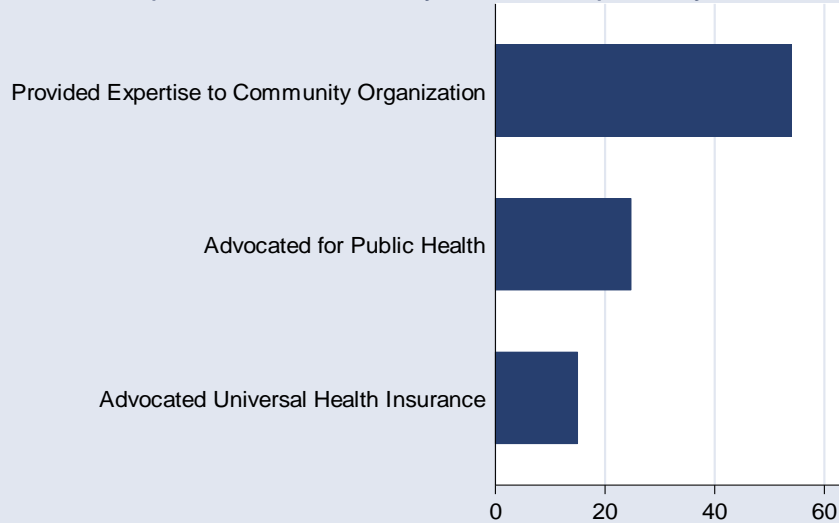
Behaviors: Relations with Industry

Receipt of incentives from industry in past year



- Cardiologists were significantly more likely than non-cardiologists to receive drug samples from industry (91% v. 73%), food and beverages (89% v. 83%), honoraria for speaking (50% v. 12%), consulting pay (40% v. 13%), payments for travel expenses (34% v. 13%), payments for serving on an industry board (19% v. 7%), free tickets to cultural /sporting events (17% v. 6%) and payments for enrollment in clinical trials (8% v. 3%).

Behaviors: Moral Attributes
Participation in community service in past 3 years



•Physicians were more likely to provide their medical expertise to community groups (54%) than they were to encourage their professional society to advocate for public health (25%) or to advocate for universal health insurance (15%).

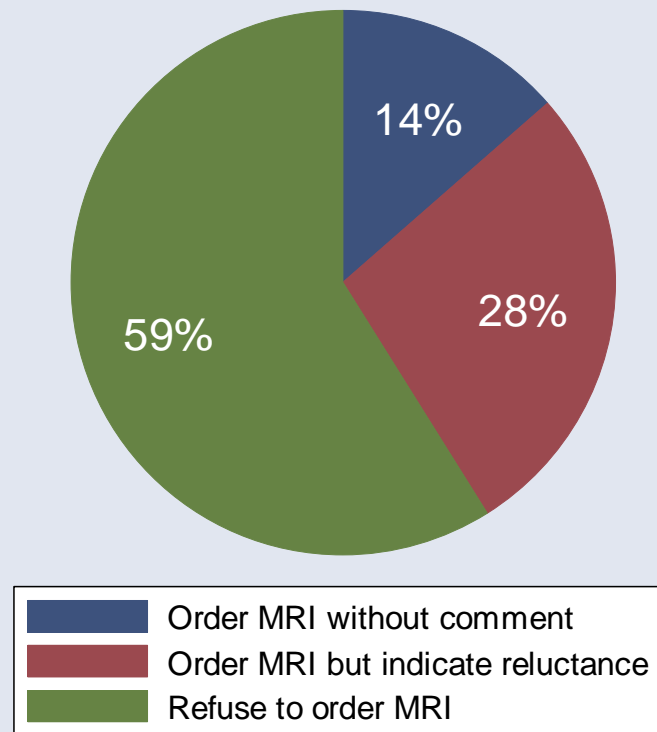
Behaviors: Moral Attributes
Provided health-related expertise to community organizations in the past 3 years



•Black physicians were most likely to have provided health related expertise to community organizations in the past three years (71%). Asian physicians were least likely to have done so (37%).

•Family practitioners and pediatricians were most likely to have provided health related expertise to community organizations in the past three years (64%). Anesthesiologists were least likely to have done so (33%).

Emerging Areas: Managing the Costs of Care--Hypothetical Scenario
Would you order an unnecessary MRI for a healthy patient with back pain if the patient insisted on it?



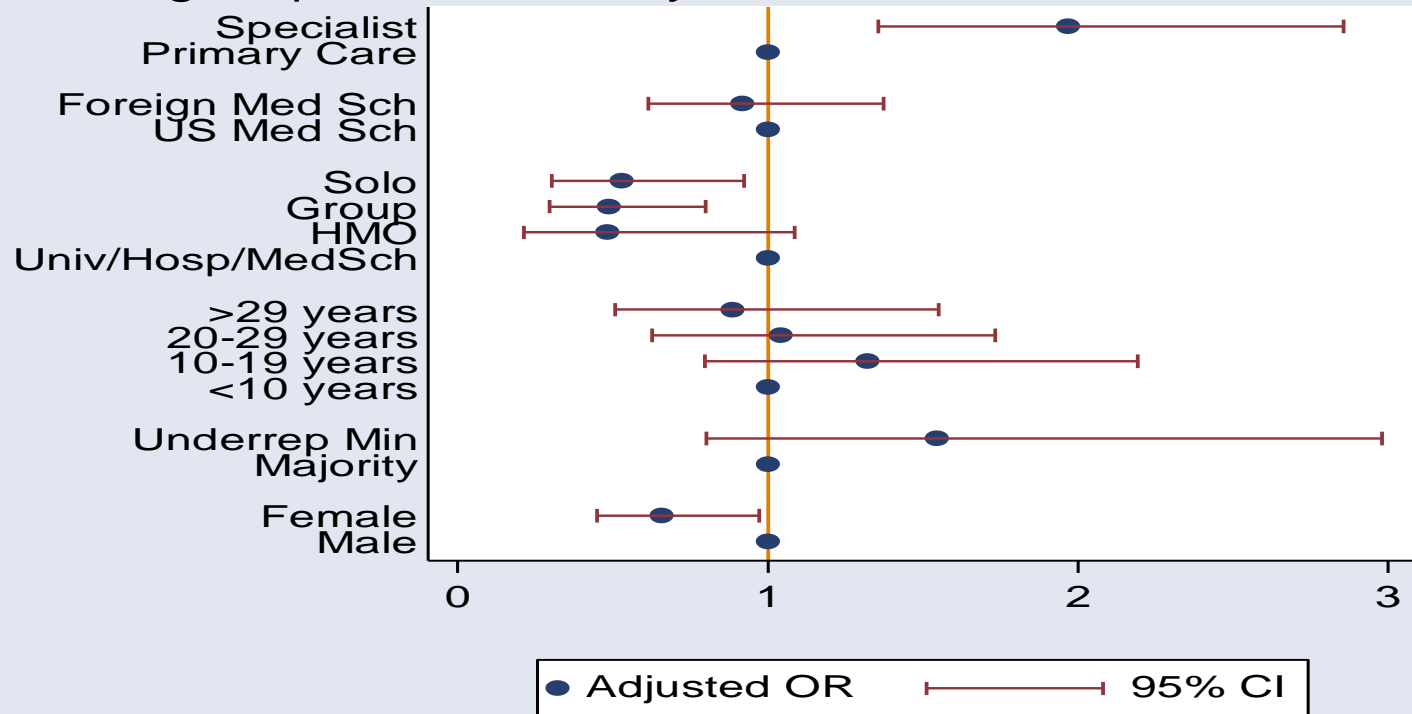
- 14% of respondents indicated they would order the MRI without discussing the issue with the patient.
- About one quarter (28%) would order the MRI but would inform the patient that they are doing so reluctantly.
- 60% of respondents would refuse to order the MRI.

Results Multivariate Analyses

- Maintenance of competence
 - Preparedness to evaluate new clinical knowledge
 - Use of computerized decisions support
- Collegial self-regulation
 - Preparedness to deal with impaired or incompetent colleagues

Maintenance of Competence

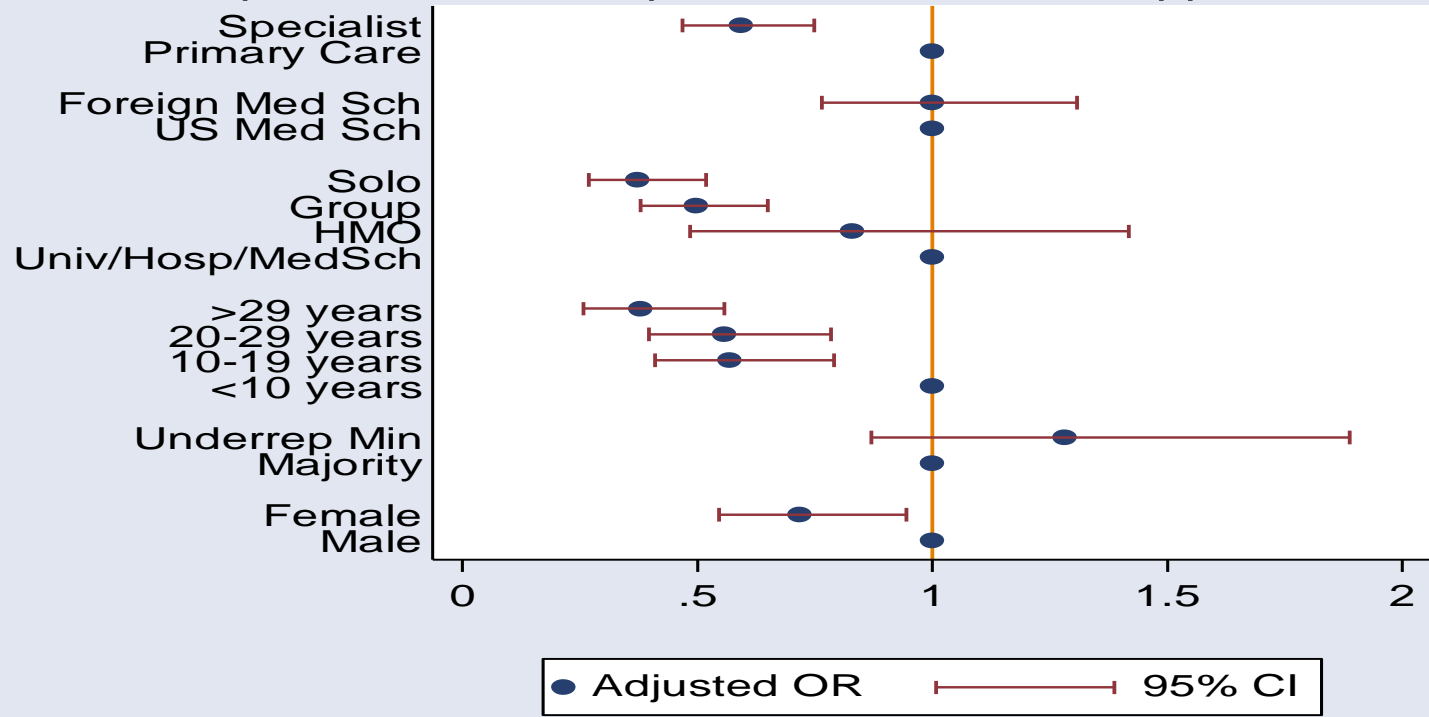
Odds of Being Prepared to Critically Evaluate New Clinical Knowledge



• In multivariate analyses specialist physicians were twice as likely as primary care physicians to feel prepared to critically evaluate new clinical information. Compared to physicians in academic settings, those in solo practice and those in group practices were significantly less likely to feel prepared to critically evaluate new clinical information. Compared to males, female physicians were less likely to feel prepared to critically evaluate new clinical information (OR: 0.66).

Maintenance of Competence

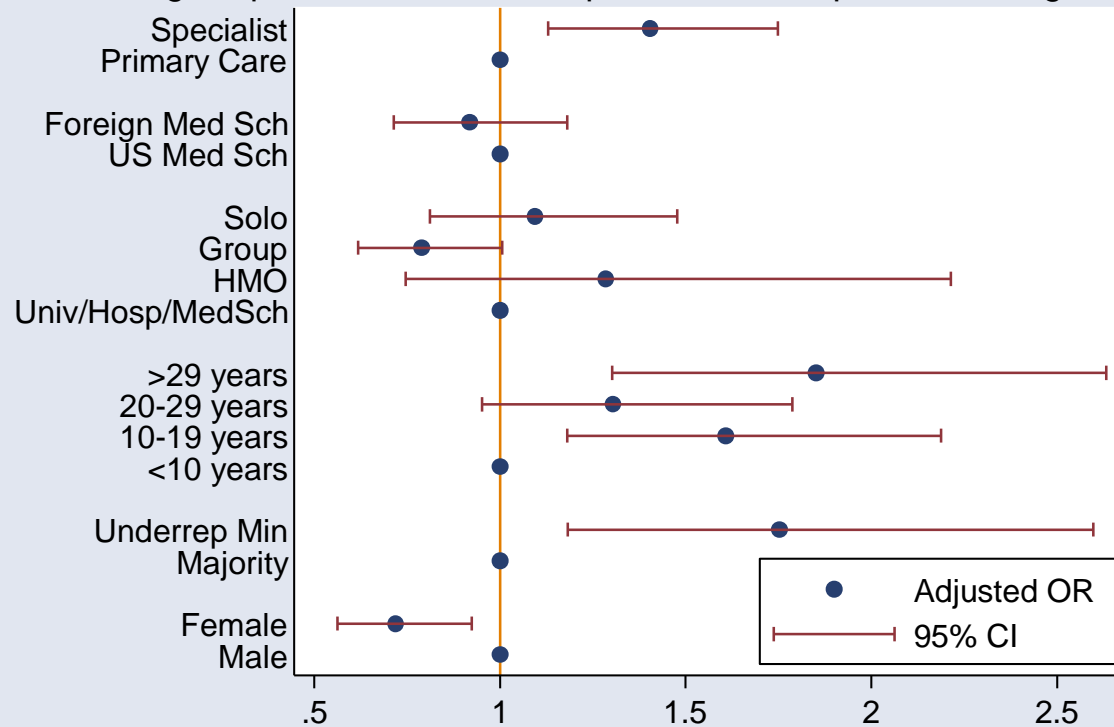
Odds of Frequent Use of Computerized Decision Support Tools



• In multivariate analyses specialist physicians were less likely than primary care physicians to have ever used computerized decision support tools in the real time management of physicians (OR: 0.83). Compared to physicians in academic settings, those in solo practice and those in group practices were significantly less likely to have ever used computerized decision support tools in the real time management of physicians. Compared to males, female physicians were less likely to have ever used computerized decision support tools in the real time management of physicians (OR: 0.75).

Collegial Self-Regulation

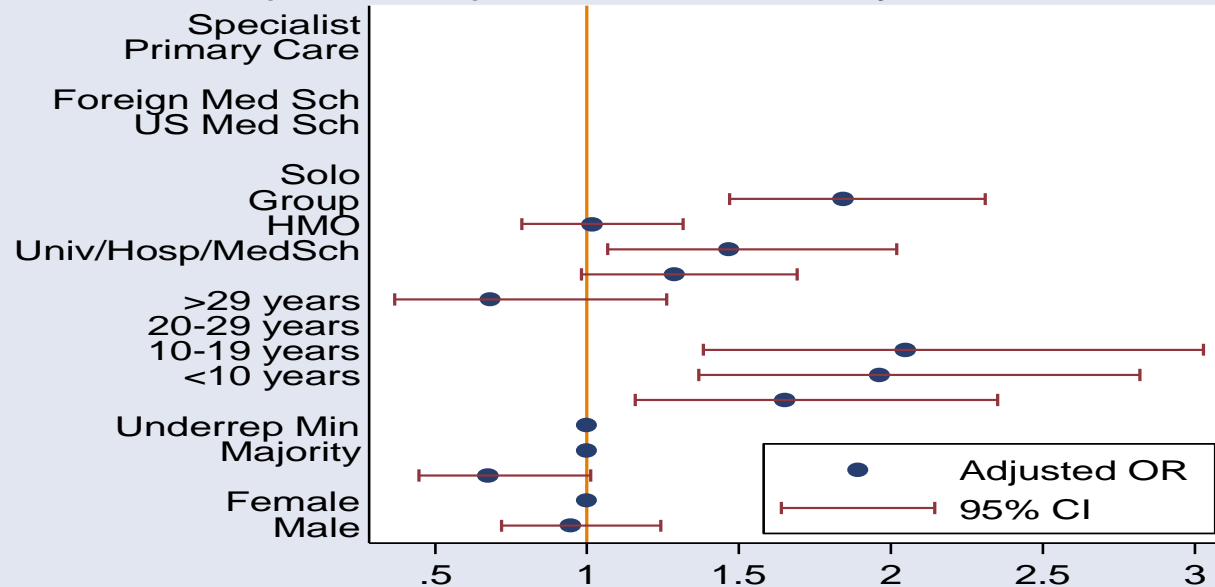
Odds of Being Prepared to Deal with Impaired or Incompetent Colleagues



In multivariate analyses specialist physicians were twice as likely as primary care physicians to feel prepared to critically evaluate new clinical information. Compared to physicians in academic settings, those in solo practice and those in group practices were significantly less likely to feel prepared to critically evaluate new clinical information. Compared to males, female physicians were less likely to feel prepared to critically evaluate new clinical information (OR: 0.66). 43

Moral Attributes: Managing the Costs of Care

Hypothetical Scenario--Odds of complying with patient request for unnecessary MRI



•In multivariate analyses specialist physicians were more likely than primary care physicians to report they would comply with a patient's request for an unnecessary MRI (OR: 1.86). Compared to physicians in academic settings, those in solo practice were more likely to report they would comply with a patient's request for an unnecessary MRI (OR: 1.40). Compared to physicians in practice less than 10 years, more senior physicians were significantly more likely to report they would comply with a patient's request for an unnecessary MRI

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For More Information

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