
**JOURNALS IN
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Obstetrics and Gynecology**

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**Adverse Childhood
Experiences and Repeat
Induced Abortion**

M. E. Bleil et al.

Objective: The objective of the study was to characterize the backgrounds of women who have repeat abortions. *Study Design:* In a cross-sectional study of 259 women (mean age, 35.2 ± 5.6 years), the relation between adverse experiences in childhood and risk of having two or more abortions versus zero abortions or one abortion was examined. Self-reported adverse events occurring between the ages of zero and twelve years were summed. *Results:* Independent of confounding factors, women who experienced more abuse, personal safety, and total adverse events in childhood were more likely to have two or more abortions versus zero abortions (odds ratio [OR], 2.56; 95% CI, 1.15 to 5.71; OR, 2.74; 95% CI, 1.29 to 5.82; and OR, 1.59; 95% CI, 1.21 to 2.09, respectively) and versus one abortion (OR, 5.83; 95% CI, 1.71 to 19.89; OR, 2.23; 95% CI, 1.03 to 4.81; and OR, 1.37; 95% CI, 1.04 to 1.81, respectively). Women who experienced more family disruption events in childhood were more likely to have two or more abortions versus zero abortions (OR, 1.75; 95% CI, 1.14 to 2.69) but not versus one abortion (OR, 1.16; 95% CI, 0.79 to 1.70). *Conclusion:* Women who have repeat abortions are more likely to have experienced childhood adversity than those having zero or one abortion.

**Obstetrician-Gynecologists'
Views on Contraception and
Natural Family Planning:
A National Survey**

R. E. Lawrence et al.

Objective: The objective of the study was to characterize beliefs about contraception among obstetrician-gynecologists. *Study Design:* National mailed survey of 1,800 U.S. obstetrician-gynecologists. Criterion variables were whether physicians have a moral or ethical objection to, and whether they would offer, six common contraceptive methods. Covariates included physician demographic and religious characteristics. *Results:* One thousand one hundred fifty-four of 1,760 eligible obstetrician-gynecologists responded (66 percent). Some obstetrician-gynecologists object to intrauterine devices (4.4 percent object, 3.6 percent would not offer), progesterone implants and/or injections (1.7 percent object, 2.1 percent would not offer), tubal ligations (1.5 percent object, 1.5 percent would not offer), oral contraceptive pills (1.3 percent object, 1.1 percent would not offer), condoms (1.3 percent object, 1.8 percent would not offer), and the diaphragm or cervical cap with spermicide (1.3 percent object, 3.3 percent would not offer). Religious physicians were more likely to object (odds ratio, 7.4) and to refuse to provide a contraceptive (odds ratio, 1.9). *Conclusion:* Controversies about contraception are ongoing but among obstetrician-gynecologists, objections and refusals to provide contraceptives are infrequent.

**Annals of
Internal Medicine**

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**Lost in Translation:
The Unintended Consequences of
Advance Directive Law on Clinical Care**

L. S. Castillo et al.

Background: Advance directive law may compromise the clinical effectiveness of advance directives. *Purpose:* To identify

unintended legal consequences of advance directive law that may prevent patients from communicating end-of-life preferences. *Data Sources:* Advance directive legal statutes for all fifty U.S. states and the District of Columbia and English-language searches of LexisNexis, Westlaw, and Medline from 1966 to August 2010. *Study Selection:* Two independent reviewers selected fifty-one advance directive statutes and twenty articles. Three independent legal reviewers selected 105 legal proceedings. *Data Extraction:* Two reviewers independently assessed data sources and used critical content analysis to determine legal barriers to the clinical effectiveness of advance directives. Disagreements were resolved by consensus. *Data Synthesis:* Legal and content-related barriers included poor readability (that is, laws in all states were written above a twelfth-grade reading level), health care agent or surrogate restrictions (for example, forty states did not include same-sex or domestic partners as default surrogates), and execution requirements needed to make forms legally valid (for example, thirty-five states did not allow oral advance directives, and forty-eight states required witness signatures, a notary public, or both). Vulnerable populations most likely to be affected by these barriers included patients with limited literacy, limited English proficiency, or both, who cannot read or execute advance directives; same-sex or domestic partners who may be without legally valid and trusted surrogates; and unbefriended, institutionalized, or homeless patients who may be without witnesses and suitable surrogates. *Limitation:* Only appellate-level legal cases were available, which may have excluded relevant cases. *Conclusion:* Unintended negative consequences of advance-directive legal restrictions may prevent all patients, and particularly vulnerable patients, from making and communicating their end-of-life wishes and having them honored. These restrictions have rendered advance directives less clinically useful. Recommendations include improving readability, allowing oral advance directives, and eliminating witness or notary requirements.

Determinants of Medical Expenditures in the Last 6 Months of Life

A. S. Kelley et al.

Background: End-of-life medical expenditures exceed costs of care during other years, vary across regions, and are likely to be unsustainable. Identifying determinants of expenditure variation may reveal opportunities for reducing costs. *Objective:* To identify patient-level determinants of Medicare expenditures at the end of life and to determine the contributions of these factors to expenditure variation while accounting for regional characteristics. It was hypothesized that race or ethnicity, social support, and functional status are independently associated with treatment intensity and controlling for regional characteristics, and that individual characteristics account for a substantial proportion of expenditure variation. *Design:* Using data from the Health and Retirement Study, Medicare claims, and the Dartmouth Atlas of Health Care, relationships were modeled between expenditures and patient and regional characteristics. *Setting:* United States, 2000 to 2006. *Participants:* Two thousand three hundred ninety-four Health and Retirement Study decedents aged 65.5 years or older. *Measurements:* Medicare expenditures in the last six months of life were estimated in a series of two-level multivariable regression models that included patient, regional, and patient and regional characteristics. *Results:* Decline in function (rate ratio [RR], 1.64 [95% CI, 1.46 to 1.83]); Hispanic ethnicity (RR, 1.50 [CI, 1.22 to 1.85]); black race (RR, 1.43 [CI, 1.25 to 1.64]); and certain chronic diseases, including diabetes (RR, 1.16 [CI, 1.06 to 1.27]), were associated with higher expenditures. Nearby family (RR, 0.90 [CI, 0.82 to 0.98]) and dementia (RR, 0.78 [CI, 0.71 to 0.87]) were associated with lower expenditures, and advance care planning had no association. Regional characteristics, including end-of-life practice patterns (RR, 1.09 [CI, 1.06 to 1.14]) and hospital beds per capita (RR, 1.01 [CI, 1.00 to 1.02]), were associated with higher expenditures.

Patient characteristics explained 10 percent of overall variance and retained statistically significant relationships with expenditures after regional characteristics were controlled for. *Limitation:* The study limitations include the decedent sample, proxy informants, and a large proportion of unexplained variation. *Conclusion:* Patient characteristics, such as functional decline, race or ethnicity, chronic disease, and nearby family, are important determinants of expenditures at the end of life, independent of regional characteristics.

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**Systematic Review:
The Effect on Surrogates of Making
Treatment Decisions for Others**

D. Wendler and A. Rid

Background: Clinical practice relies on surrogates to make or help to make treatment decisions for incapacitated adults; however, the effect of this practice on surrogates has not been evaluated. Purpose: To assess the effect on surrogates of making treatment decisions for adults who cannot make their own decisions. *Data Sources:* Empirical studies published in English and listed in Medline, Embase, CINAHL, Bioethicsline, PsycInfo, or Scopus before July 1, 2010. Study Selection: Eligible studies provided quantitative or qualitative empirical data, by evaluating surrogates, regarding the effect on surrogates of making treatment decisions for an incapacitated adult. *Data Extraction:* Information on study location, number and type of surrogates, timing of data collection, type of decisions, patient setting, methods, main findings, and limitations. *Data Synthesis:* Forty studies, twenty-nine using qualitative and eleven using quantitative methods, provided data on 2,854 surrogates, more than one half of whom were family members of the patient. Most surrogates were surveyed several months to years after making treatment decisions, the majority of which were end-of-life decisions. The quantitative studies found that at least one third of surrogates experienced a negative emotional burden as the result of making treatment decisions. The

qualitative studies reported that many or most surrogates experienced negative emotional burden. The negative effects on surrogates were often substantial and typically lasted months or, in some cases, years. The most common negative effects cited by surrogates were stress, guilt over the decisions they made, and doubt regarding whether they had made the right decisions. Nine of the forty studies also reported beneficial effects on a few surrogates, the most common of which were supporting the patient and feeling a sense of satisfaction. Knowing which treatment is consistent with the patient's preferences was frequently cited as reducing the negative effect on surrogates. *Limitations:* Thirty-two of the forty articles reported data collected in the United States. Because the study populations were relatively homogenous, it is unclear whether the findings apply to other groups. In some cases, the effect of making treatment decisions could not be isolated from that of other stressors, such as grief or prognostic uncertainty. Nine of the studies had a response rate less than 50 percent, and nine did not report a response rate. Many of the studies had a substantial interval between the treatment decisions and data collection. *Conclusion:* Making treatment decisions has a negative emotional effect on at least one third of surrogates, which is often substantial and typically lasts months (or sometimes years). Future research should evaluate ways to reduce this burden, including methods to identify which treatment options are consistent with the patient's preferences.

**Archives of
Internal Medicine**

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**Surrogate Consent for Percutaneous
Endoscopic Gastrostomy**

J. T. Berger et al.

Feeding patients with dementia though percutaneous endoscopically inserted gastrostomy (PEG) tubes has not been shown to

improve functional status, nutritional status, or mortality, despite its frequent use. Because anorexia due to dementia follows a loss of decision-making capacity, a surrogate's consent is generally required for PEG tube insertion. Unfortunately, surrogate decisions are often inaccurate, and elderly patients generally reject PEG feeding for a condition of dementia. General deficiencies in informed consent also contribute to the misapplication of PEG tubes. In addition, decisions for PEG may reflect an emotional response to avoid "starvation." Last, the personal, nonevidence-based views of many health professionals about tube feeding for cases of dementia may also contribute to PEG misuse.

Chest

Volume 139, Number 2
February 2011

Shaping Patients' Decisions

*J. S. Swindell, A. L. McGuire,
and S. D. Halpern*

Many physicians struggle to strike an acceptable balance between respecting patient autonomy and guiding patients' decisions toward what is in their best interests based on their expressed values and long-term goals. Over the past forty years, the ethical principle of respect for autonomy has gained primacy in Western medicine, but judgments about the appropriate dose of influence on patient decisions have been clouded by misconceptions about patient autonomy. In this article, the authors consider three such misconceptions with the goal of helping physicians to optimally promote their patients' interests.

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A Brief Historical and Theoretical Perspective on Patient Autonomy and Medical Decision Making: Part I—The Beneficence Model

J. F. Will

As part of a larger series addressing the intersection of law and medicine, this article is the

first of two introductory pieces. This article explores the nature of the physician–patient relationship and of the practice of medicine dating from the Hippocratic tradition to the end of the nineteenth century, a period during which a beneficence-based medical ethic remained relatively stable. The medical literature dating from the Hippocratic texts to the early codes of the American Medical Association did not include a meaningful role for the patient in the decision-making process. In fact, the practice of benevolent deception—the deliberate withholding of any information thought by the physician to be detrimental to the patient's prognosis—was encouraged. However, as philosophers identified an inherent value in respecting patient self-determination and the law imposed a duty on physicians to obtain informed consent, 2,400 years of relative stability under the beneficence model gave way to the autonomy model.

Critical Care Medicine

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Informed Consent in Research to Improve the Number and Quality of Deceased Donor Organs

M. M. Rey et al.

Improving the management of potential organ donors in the intensive care unit could meet an important public health goal by increasing the number and quality of transplantable organs. However, randomized clinical trials are needed to quantify the extent to which specific interventions might enhance organ recovery and outcomes among transplant recipients. Among several barriers to conducting such studies are the absence of guidelines for obtaining informed consent for such studies and the fact that deceased organ donors are not covered by extant federal regulations governing oversight of research with human subjects. This article explores the underexamined ethical issues that arise in the context of donor management studies and provides ethical

guidelines and suggested regulatory oversight mechanisms to enable such studies to be conducted ethically. The authors conclude that both the respect that is traditionally accorded to the prior wishes of the dead and the possibility of postmortem harm support a role for surrogate consent of donors in such randomized controlled trials. Furthermore, although recipients will often be considered human subjects under federal regulations, several ethical arguments support waiving requirements for recipient consent in donor management randomized controlled trials. Finally, the authors suggest that new regulatory mechanisms, perhaps linked to existing regional and national organ donation and transplantation infrastructures, must be established to protect patients in donor management studies while limiting unnecessary barriers to the conduct of this important research.

Human Reproduction

Volume 26, Number 1
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Malignancies among Women Who Gave Birth after In Vitro Fertilization

B. Källén et al.

Background: Relatively few studies published to date have investigated in vitro fertilization and cancer risk. In this study the authors compared the occurrence of cancer in women who gave birth after IVF with all other women who gave birth in the study period. *Methods:* All women who were treated with IVF and gave birth during the years 1982 to 2006 in Sweden were identified from all IVF clinics, and the occurrence of cancer in these women was identified by linkage with the nationwide Swedish cancer register. Comparison was made with Mantel-Haenszel odds ratios (ORs), adjusting for year of delivery and maternal age, parity, and smoking. Cancer before IVF was only studied in first-parity women. Specific cancer forms were also studied. *Results:* Among 24,058 women who had been treated with IVF, 1,279 appeared in the cancer register.

The total number of women studied in the population was 1,394,061, and 95,775 of these were registered in the cancer register. The risk for cancer before IVF was increased [OR 1.37, 95% CI 1.27 to 1.48] and was especially high for ovarian cancer (3.93). The risk for cancer after IVF was significantly lower (OR 0.74, 95% CI 0.67 to 0.82), mainly due to a lower-than-expected risk for breast and cervical cancer. The risk for ovarian cancer was increased but lower than the risk before IVF (2.13). *Conclusions:* Cancer or cancer treatment may increase the risk for infertility leading to IVF. After IVF, in most cases with treatment with fertility hormones, a significantly low cancer risk was found. Ovarian cancer showed an increased risk, although lower than before IVF. One possible reason is ovarian pathology causing both infertility and an increased cancer risk.

A Prospective Study Assessing Anxiety, Depression and Maternal-Fetal Attachment in Women Using PGD

J. C. Karatas et al.

Background: Preimplantation genetic diagnosis (PGD) has been described in previous cross-sectional and retrospective studies as a stressful experience. No prospective studies of the psychological impact of PGD are currently available. *Methods:* Using a prospective study design, validated measures exploring anxiety and depression were used to assess women using PGD prior to treatment, following embryo transfer, following the pregnancy test result and at twenty-four weeks of pregnancy. Maternal-fetal attachment was also assessed during pregnancy. *Results:* The prospective design revealed the cyclical pathway through PGD for many women, often comprising repeated cycles of ovarian stimulations and IVF and frozen embryo transfers. As predicted, there were significant fluctuations in women's anxiety scores, with increases observed following embryo transfer and pregnancy testing. Women's anxiety scores returned to baseline levels during pregnancy as assessed at twenty-four weeks' gestation. Depression

scores did not significantly fluctuate during PGD. Maternal–fetal attachment scores in this sample did not differ from the normative Australian data. *Conclusions:* For some women, the PGD pathway is convoluted and requires multiple IVF cycles and embryo transfers to achieve pregnancy. A subset of women experience significant emotional burden during PGD treatment, and it is these women who require closer attention and support. In this sample, emotional adjustment in pregnancy following PGD appears to be sound.

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Obstetric Outcome after In Vitro Fertilization with Single or Double Embryo Transfer

A. Sazonova et al.

Background: IVF children, including singletons, are known to have a poorer obstetric outcome than children born after spontaneous conception. With a broad introduction of single embryo transfer (SET), this scenario might change. This study compares the obstetric outcome after IVF with SET, elective SET (eSET), non-elective SET (non-eSET) and double embryo transfer (DET) with outcomes in the general population. *Methods:* All IVF children born in Sweden after IVF treatment during the years 2002 to 2006 (n=13,544 children) were included and compared with all non-IVF children born during the same time period (n=587,009 children). Data were collected from all sixteen Swedish IVF clinics and cross-linked with the Swedish Medical Birth Registry. Main outcomes were preterm birth (<28, <32, and <37 weeks), very low birthweight and low-birthweight (LBW). Adjusted odds ratios were calculated. *Results:* In total, 7,763 children were born after SET and 5,724 children after DET. Comparing all SET children, irrespective of multiplicity, with all children in the general population, significantly higher rates of <28 weeks was found for the IVF children. Comparing IVF singletons, irrespective of SET and DET with non-IVF singletons from the general popula-

tion, significantly higher rates of <28 weeks, <37 weeks, low birthweight and very low birthweight were found. eSET singletons, compared with singletons in the general population, had a significantly higher rate of <37 weeks and non-eSET singletons had significantly higher rates of <28 weeks and <2,500 g births. *Conclusions:* Children born after IVF had a poorer obstetric outcome compared with children from the general population. Singletons, when analyzed as one group, irrespective of whether the children were born after eSET, non-eSET, or DET, also had a poorer obstetric outcome with higher rates of preterm and low birthweight compared with singletons in the general population.

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Decisional Conflict and the Disposition of Frozen Embryos: Implications for Informed Consent

*A. D. Lyerly, S. Nakagawa,
and M. Kuppermann*

Background: Fertility patients often struggle with decisions about disposition of embryos remaining after fertility treatment. The authors aimed to identify predictors and correlates of decisional conflict among patients facing these decisions. *Methods:* The authors analyzed results from a survey of 2,6210 patients from nine geographically diverse U.S. fertility clinics. The main outcome measure was decisional conflict about embryo disposition, as measured by the decisional conflict scale (DCS). *Results:* Of 1,244 respondents who returned the survey, 1,005 with cryopreserved embryos and DCS scores were included in the analysis. Of the respondents, 39 percent reported high decisional conflict (DCS \geq 37.5). Thoughts about future childbearing were associated with high decisional conflict: respondents who were either uncertain about whether to have a baby in the future or sure they did not want to have a baby were at higher odds of high decisional conflict than participants who desired a baby [adjusted odds ratio (aOR)=3.93, P<0.001, and aOR=1.69, P=0.04, respectively]. Also

associated with high decisional conflict were being likely to have embryos thawed and discarded (aOR=2.08, P<0.001), donated for research (aOR=1.66, P=0.01) or frozen “forever” (aOR=1.90, P=0.01); being likely to choose compassionate transfer if it were available (aOR=1.65, P=0.03); attributing high, but not full, moral status to human embryos; not having enough information; and not being satisfied with the informed consent process. *Conclusions:* Decisional conflict about frozen embryo disposition differs according to reproductive preferences that may vary according to stage of treatment. Informed consent for embryo disposition should be revisited periodically with serious discussions about disposition after childbearing is complete.

**Journal of the
American Geriatrics Society**

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**Hospice Use and Outcomes in
Nursing Home Residents
with Advanced Dementia**

D. K. Kiely et al.

Objectives: To identify characteristics of nursing home residents with advanced dementia and their health care proxies associated with hospice referral and to examine the association between hospice use and the treatment of pain and dyspnea and unmet needs during the last seven days of life. *Design:* Prospective cohort study. *Setting:* Twenty-two Boston-area nursing homes. *Participants:* Three hundred twenty-three nursing home residents with advanced dementia and their health care proxies. *Measurements:* Data were collected at baseline and quarterly for up to eighteen months. Hospice referral, frequency of pain and dyspnea, and treatment of these symptoms was ascertained. Health care proxies reported unmet needs during the last seven days of the residents’ lives for communication, information, emotional support, and

help with personal care. *Results:* Twenty-two percent of residents were referred to hospice. After multivariable adjustment, factors associated with hospice referral were nonwhite race, eating problems, health care proxy’s perception that the residents had less than six months to live, and better health care proxy mental health. Residents in hospice were more likely to receive scheduled opioids for pain (AOR=3.16; 95% CI=1.57 to 6.36) and oxygen, morphine, scopolamine, or hyoscyamine for dyspnea (AOR=3.28, 95% CI=1.37 to 7.86). Health care proxies of residents in hospice reported fewer unmet needs in all domains during the last seven days of the residents’ lives. *Conclusions:* A minority of nursing home residents with advanced dementia received hospice care. Hospice recipients were more likely to received scheduled opioids for pain and symptomatic treatment for dyspnea and had fewer unmet needs at the end of life.

**Journal of the American
Medical Association**

Volume 304, Number 23
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**Estimated Supply of Organ Donors after
Circulatory Determination of Death:
A Population-Based Cohort Study**

S. D. Halpern et al.

Increased use of donors after circulatory determination of death (DCDD) has been advocated as the most viable method for increasing the supply of transplantable organs. However, the number of potential DCDD in the United States remains uncertain, with estimates accruing from retrospective single-center experiences in adult or pediatric hospitals. The authors conducted a prospective, population-based cohort study to estimate the potential increase in the supply of deceased donors that might accrue from optimal use of controlled DCDD, donors in whom life-sustaining therapies are withdrawn and organs are recovered following the loss of spontaneous circulation.

Volume 304, Number 24
December 22, 2010

**A Behavioral and Systems
View of Professionalism**

C. S. Lesser et al.

Professionalism may not be sufficient to drive the profound and far-reaching changes needed in the U.S. health care system, but without it, the health care enterprise is lost. Formal statements defining professionalism have been abstract and principle-based, without a clear description of what professional behaviors look like in practice. This article proposes a behavioral and systems view of professionalism that provides a practical approach for physicians and the organizations in which they work. A more behaviorally oriented definition makes the pursuit of professionalism in daily practice more accessible and attainable. Professionalism needs to evolve from being conceptualized as an innate character trait or virtue to sophisticated competencies that can and must be taught and refined over a lifetime of practice. Furthermore, professional behaviors are profoundly influenced by the organizational and environmental context of contemporary medical practice, and these external forces need to be harnessed to support—not inhibit—professionalism in practice. This perspective on professionalism provides an opportunity to improve the delivery of health care through education and system-level reform.

Volume 305, Number 2
January 12, 2011

**Ethical Allocation of
Preexposure HIV Prophylaxis**

L. O. Gostin and S. C. Kim

Civil society–led movements transformed global AIDS action from deep skepticism about extending antiretroviral (ARV) treatment in low- and middle-income countries to a historic scaling up of treatment toward universal access. During its first phase (2003 to 2008), the U.S. President’s Emergency Plan for AIDS Relief (PEPFAR)—the largest national commitment to combat a single dis-

ease—supported treatment for more than two million people, care for more than ten million people, and prevention of mother-to-child transmission in sixteen million pregnancies. The Global Fund to Fight AIDS, Tuberculosis and Malaria, a unique international financing institution, has committed \$19.3 billion in 144 countries to support large-scale prevention, treatment, and care, with most resources devoted to AIDS treatment.

Volume 305, Number 5
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**Association of Hospice Agency
Profit Status with Patient Diagnosis,
Location of Care, and Length of Stay**

M. W. Wachterman et al.

Context: Medicare’s per diem payment structure may create financial incentives to select patients who require less resource-intensive care and have longer hospice stays. For-profit and nonprofit hospices may respond differently to financial incentives. *Objective:* To compare patient diagnosis and location of care between for-profit and nonprofit hospices and examine whether number of visits per day and length of stay vary by diagnosis and profit status. *Design, Setting, and Patients:* Cross-sectional study using data from the 2007 National Home and Hospice Care Survey. Nationally representative sample of 4,705 patients discharged from hospice. *Main Outcome Measures:* Diagnosis and location of care (home, nursing home, hospital, residential hospice, or other) by hospice profit status. Hospice length of stay and number of visits per day by various hospice personnel. *Results:* For-profit hospices (1,087 discharges from 145 agencies), compared with nonprofit hospices (3,618 discharges from 524 agencies), had a lower proportion of patients with cancer (34.1 percent; 95% CI, 29.9–38.6 percent, versus 48.4 percent; 95% CI, 45.0–51.8 percent) and a higher proportion of patients with dementia (17.2 percent; 95% CI, 14.1–20.8 percent, versus 8.4 percent; 95% CI, 6.6–10.6 percent) and other non-cancer diagnoses (48.7 percent; 95% CI, 43.2–54.1 percent, versus 43.2 percent; 95% CI, 40.0–46.5 percent; adjusted $P < 0.001$). After adjustment for demographic,

clinical, and agency characteristics, there was no significant difference in location of care by profit status. For-profit hospices compared with nonprofit hospices had a significantly longer length of stay (median, twenty days; interquartile range [IQR], six to eighty-eight, versus sixteen days; IQR, five to fifty-two days; adjusted $P=0.01$) and were more likely to have patients with stays longer than 365 days (6.9 percent; 95% CI, 5.0–9.4 percent, versus 2.8 percent; 95% CI, 2.0–4.0 percent) and less likely to have patients with stays of less than seven days (28.1 percent; 95% CI, 23.9–32.7 percent, versus 34.3 percent; 95% CI, 31.3–37.3 percent; $P=0.005$). Compared with cancer patients, those with dementia or other diagnoses had fewer visits per day from nurses (0.50 visits; IQR, 0.32–0.87, versus 0.37 visits; IQR, 0.20–0.78, and 0.41 visits; IQR, 0.26–0.79, respectively; adjusted $P=0.002$) and social workers (0.15 visits; IQR, 0.07–0.31, versus 0.11 visits; IQR, 0.04–0.27, and 0.14 visits; IQR, 0.07–0.31, respectively; adjusted $P<0.001$). *Conclusion:* Compared with nonprofit hospice agencies, for-profit hospice agencies had a higher percentage of patients with diagnoses associated with lower-skilled needs and longer lengths of stay.

Journal of General Internal Medicine

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How Well Do Doctors Know their Patients? Factors Affecting Physician Understanding of Patients' Health Beliefs

R. L. Street Jr. and P. Haidet

Background: An important feature of patient-centered care is physician understanding of their patients' health beliefs and values. *Objective:* Determine physicians' awareness of patients' health beliefs as well as communication, relationship, and demographic factors associated with better physician understanding of patients' illness perspectives. *Design:* Cross-sectional, observational study.

Research Participants: A convenience sample of 207 patients and 29 primary care physicians from 10 outpatient clinics. *Approach and Measures:* After their consultation, patients and physicians independently completed the CONNECT instrument, a measure that assesses beliefs about the degree to which the patient's condition has a biological cause, is the patient's fault, is one the patient can control, has meaning for the patient, can be treated with natural remedies, and patient preferences for a partnership with the physician. Physicians completed the measure again on how they thought the patient responded. Active patient participation (frequency of questions, concerns, acts of assertiveness) was coded from audio-recordings of the consultations. Physicians' answers for how they thought the patient responded to the health belief measure were compared to their patients' actual responses. Degree of physician understanding of patients' health beliefs was computed as the absolute difference between patients' health beliefs and physicians' perception of patients' health beliefs. *Key Results:* Physicians' perceptions of their patients' health beliefs differed significantly ($P<0.001$) from patients' actual beliefs. Physicians also thought patients' beliefs were more aligned with their own. Physicians had a better understanding of the degree to which patients believed their health conditions had personal meaning ($p=0.001$), would benefit from natural remedies ($p=0.049$), were conditions the patient could control ($p=0.001$), and wanted a partnership with the doctor ($p=0.014$) when patients more often asked questions, expressed concerns, and stated their opinions. Physicians were poorer judges of patients' beliefs when patients were African-American (desire for partnership) ($p=0.013$), Hispanic (meaning) ($p=0.075$), or of a different race (sense of control) ($p=0.024$). *Conclusions:* Physicians were not good judges of patient's health beliefs, but had a substantially better understanding when patients more actively participated in the consultation. Strategies for increasing physicians' awareness of patients' health beliefs include pre-consultation assessment of patients' beliefs, implementing cultur-

ally appropriate patient activation programs, and greater use of partnership-building to encourage active patient participation.

New England Journal of Medicine

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Induced First-Trimester Abortion and Risk of Mental Disorder

T. Munk-Olsen et al.

Background: Concern has been expressed about potential harm to women's mental health in association with having an induced abortion, but it remains unclear whether induced abortion is associated with an increased risk of subsequent psychiatric problems. *Methods:* The authors conducted a population-based cohort study that involved linking information from the Danish Civil Registration system to the Danish Psychiatric Central Register and the Danish National Register of Patients. The information consisted of data for girls and women with no record of mental disorders during the 1995 to 2007 period who had a first-trimester induced abortion or a first childbirth during that period. The authors estimated the rates of first-time psychiatric contact (an inpatient admission or outpatient visit) for any type of mental disorder within the twelve months after the abortion or childbirth as compared with the nine-month period preceding the event. *Results:* The incidence rates of first psychiatric contact per thousand person-years among girls and women who had a first abortion were 14.6 (95% CI, 13.7–15.6) before abortion and 15.2 (95% CI, 14.4–16.1) after abortion. The corresponding rates among girls and women who had a first childbirth were 3.9 (95% CI, 3.7–4.2) before delivery and 6.7 (95% CI, 6.4–7.0) post partum. The relative risk of a psychiatric contact did not differ significantly after abortion as compared with before abortion ($P=0.19$) but did increase af-

ter childbirth as compared with before childbirth ($P<0.001$). *Conclusions:* The finding that the incidence rate of psychiatric contact was similar before and after a first-trimester abortion does not support the hypothesis that there is an increased risk of mental disorders after a first-trimester induced abortion.

PLoS Medicine

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A Surprising Prevention Success: Why Did the HIV Epidemic Decline in Zimbabwe?

D. T. Halperin et al.

Summary Points: (1) There is growing recognition that primary prevention, including behavior change, must be central in the fight against HIV/AIDS. The earlier successes in Thailand and Uganda may not be fully relevant to the severely affected countries of southern Africa. (2) The authors conducted an extensive multi-disciplinary synthesis of the available data on the causes of the remarkable HIV decline that has occurred in Zimbabwe (29 percent estimated adult prevalence in 1997 to 16 percent in 2007), in the context of severe social, political, and economic disruption. (3) The behavioral changes associated with HIV reduction—mainly reductions in extramarital, commercial, and casual sexual relations, and associated reductions in partner concurrency—appear to have been stimulated primarily by increased awareness of AIDS deaths and secondarily by the country's economic deterioration. These changes were probably aided by prevention programs utilizing both mass media and church-based, workplace-based, and other inter-personal communication activities. (4) Focusing on partner reduction, in addition to promoting condom use for casual sex and other evidence-based approaches, is crucial for developing more effective prevention programs, especially in regions with generalized HIV epidemics.