Journals in Medicine

Archives of Internal Medicine

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End-of-Life Care: Findings from a National Survey of Informal Caregivers

Jennifer L. Wolff et al.

Background: Family and friends are thought to be the predominant providers of end-of-life care, although nationally representative data on this topic have been lacking. *Methods*: This study draws from the 1999 National Long-Term Care Survey and its Informal Caregivers Survey to characterize primary informal caregivers' experiences providing end-of-life care to chronically disabled community-dwelling older adults. Study participants were 1,149 primary informal caregivers, stratified by care recipients' survival or death during the following twelve months. *Results*: An estimated 11.2 percent of the chronically disabled community-dwelling older adults died within one year of being interviewed. Among persons who died, 72.3 percent were receiving help from an informal caregiver at the time of the interview. End-of-life primary informal caregivers helped an average of forty-three hours per week, 84.4 percent provided daily assistance, and caregiver support services were infrequently used (i.e., respite care and support groups were used by less than 5 percent of caregivers). While end-of-life caregivers reported significant emotional (28.9 percent), physical (18.4 percent), and financial (14.0 percent) strains, more than two-thirds endorsed personal rewards related to their helping role. Compared with primary informal caregivers of persons who survived the following twelve months, end-of-life caregivers provided significantly higher levels of assistance and reported more challenges and strains, but they were no less likely to endorse rewards related to their helping role. *Conclusions*: End-of-life caregivers provide frequent and intense assistance with few supportive services. These data underscore the relevance of families to end-of-life care, and the potential benefit of better integrating families in patient care.

Archives of Pediatrics and Adolescent Medicine

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Attenuating Growth in Children with Profound Developmental Disability: A New Approach to an Old Dilemma

Daniel F. Gunther and Douglas S. Diekema

Caring for children with profound developmental disabilities can be difficult and demanding. For non-ambulatory children with severe combined neurologic and cognitive impairment, all the necessities of life must be provided by caregivers, usually parents, and these tasks become more difficult as the child grows to adolescence and adulthood. Many parents would like to continue caring for their child with special needs at home but find it difficult to do so as the child increases in size. If growth could be permanently arrested while the child was still small, both child and parent would likely benefit, because this would facilitate the option of continued care in the home. Treatment of the child with high-dose estrogen, initiated at an early age, could provide this option. High-dose estrogen both inhibits growth and rapidly advances maturation of the epiphyseal growth plates, bringing about permanent attenuation in size after a relatively short period of treatment. The authors present a case report and discuss the medical and ethical considerations of such an intervention strategy. They suggest that after proper screening and informed con-

sent, growth-attenuation therapy should be a therapeutic option available to these children should their parents request it.

BMJ: British Medical Journal

Volume 333, Number 7580
December 9, 2006

Tube Feeding in Advanced Dementia: The Metabolic Perspective

L. John Hoffer

Questions about tube feeding in advanced dementia continue to bedevil doctors, surrogate decision makers, and administrators and stimulate research, topic reviews, and position papers. This article shows that the dilemma of whether or not to tube feed an incompetent, demented patient can always be clarified, and often resolved, by applying the principles of nutritional physiology. The concepts described in this article have not previously appeared in the literature dealing with the artificial feeding of incompetent patients.

Volume 334, Number 7587
February 3, 2007

Defining Limits in Care of Terminally Ill Patients

Ursula K. Braun et al.

Despite what they might say, people at the end of life rarely want everything or nothing. The authors explain how to understand and meet their needs. Invasive procedures in terminally ill patients often fail to change the course of disease. Interventions can become inappropriate overtreatment if they result only in disease-related and iatrogenic harm to the patient. Untimely referral to a hospice, poor technical performance, overuse of interventions inconsistent with preferences and prognosis, and poor communication increase the likelihood of inappropriate clinical intervention. To facilitate appropriate care and avoid inappropriate interventions, doctors need to anticipate discordance between their views and those of patients or surrogates, using the informed consent process to prevent potential discordance from becoming actual discordance and responding quickly when conflicts do occur. It is imperative for good end-of-life decision making to identify, explain, and negotiate consensus therapeutic goals to ensure that appropriate treatment occurs. This process requires effective communication skills and cultural sensitivity. A clinical scenario (which is fictitious but based on experience) illustrates the need for a proactive approach.

Volume 334, Number 7588
February 10, 2007

Role of Non-governmental Organisations in Physician Assisted Suicide

Stephen J. Ziegler and Georg Bosshard

Could right-to-die organizations be part of the solution to the many ethical difficulties doctors face over assisted suicide? Stephen Ziegler and Georg Bosshard examine two such organizations. The legalization of assisted suicide and the extent of doctors' involvement in the practice continue to generate heated debate in the medical, political, and religious communities. Historically, the discussion was strongly influenced by the Dutch model that permitted a doctor actively to hasten the death of a suffering patient. By the 1990s, however, an alternative model had emerged—physician-assisted suicide. This increases patient control by enabling self-administration of drugs, and limits the doctors' role to assessment and prescribing while involving non-physicians and nongovernmental organizations in the dying process. Recent attempts to make it legal for UK doctors to help patients die failed. Although the legalization debate is likely to continue in the United Kingdom and elsewhere, a new debate focusing on the use of people other than doctors in assisted death seems to be emerging. Non-governmental organizations occupy a central role in facilitating physician-assisted suicide in Switzerland and Oregon and also help to limit the role of doctors. Despite their importance, little is known about their services, controls, and how they fit into the larger medical system.

Critical Care Medicine

Volume 34, Number 11 Supplement
November 2006

Law's Effect on the Quality of End-of-Life Care: Lessons from the Schiavo Case

Robert A. Burt

The political circus surrounding Terri Schiavo's death is unlikely to repeat itself soon in other cases, but the underlying event that precipitated the furor is a recurrent clinical problem—the problem of conflict among family members about withdrawing or withholding life-prolonging treatment for an incompetent patient who left no advance directive or appointed health-care proxy. The laws of most states purport to solve this problem by automatic appointment of one person among the disputing family members. However, this forced resolution of the family conflict does not clearly reflect the prior values of the incompetent patient and is likely to intensify rather than ease that conflict, providing no demonstrable benefit to the incompetent patient and complicating the psychological processes of mourning for the surviving family. This article explores the benefits of a different legal rule that would require family consensus before life-prolonging treatment is withdrawn or withheld for an incompetent patient who has indicated no prior wishes regarding the resolution of family conflict.

Volume 34, Number 11 Supplement
November 2006

Understanding and Changing Attitudes toward Withdrawal and Withholding of Life Support in the Intensive Care Unit

Deborah Cook et al.

A careful examination of our attitudes toward end-of-life care is critical to our understanding of where change is needed to improve patient outcomes. The objectives of this narrative review are (1) to review why the intensive-care unit setting presents particular challenges for the delivery of optimal end-of-life care, (2) to outline how four different research methods can provide insights into our understanding of attitudes about withdrawal of life support, and (3) to suggest seven different approaches to changing prevailing attitudes toward withdrawal of life support in the intensive-care unit. To better understand attitudes about end-of-life care in general and withdrawal of life support in particular, we reviewed four different sources of data: (1) decision support tools, (2) qualitative research, (3) surveys, and (4) observational studies. Understanding these attitudes offers valuable insights about strategies that may help to improve the care of dying patients and their families. There are several ways to change attitudes; the approaches we reviewed are (1) promoting social change professionally, (2) legitimizing end-of-life research, (3) determining what families of dying patients need, (4) initiating quality improvement locally, (5) evaluating the benefits and harms of new initiatives, (6) modeling quality end-of-life care for future clinicians, and (7) using narratives.

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End-of-Life Care in the Intensive Care Unit: State of the Art in 2006

Mitchell M. Levy and J. Randall Curtis

Evidence suggests that change is occurring in end-of-life care in the intensive-care unit. There is a growing need and appreciation for the importance of education for the multidisciplinary team, but particularly for physicians, in gaining communication skills to improve the quality of end-of-life care and provide palliative care in the ICU. Studies have indicated that families are unhappy with the communication they receive when a family member is in the ICU. Evidence also suggests that families want to be involved in decisions about their loved one's care. Interventions have been tested in numerous ICUs that others can evaluate for application to their own facility in an attempt to create a global standard for end-of-life care in the ICU. Quality indicators have been defined, and an audit tool can help assess levels of performance.

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Effect of Ethics Consultations in the Intensive Care Unit

Lawrence J. Schneiderman

Although evidence-based research is limited, results suggest that ethics consultations are associated with reductions in hospital days, intensive-care unit days, and life-sustaining treatments in those patients who ultimately will not survive to discharge. Furthermore, the majority of health-care providers and patients/surrogates agreed that ethics consultations in the intensive-care unit were helpful in addressing treatment conflicts. Ethics consultations also reduce hospital costs without diminishing the quality of care. Hence, ethics consultations seem to be useful in resolving conflicts that may be inappropriately prolonging non-beneficial or unwanted treatments at the end of life. Further research on whether ethics consultations are beneficial in other settings is needed to establish the optimal scope of this intervention. Also, the benefits described here were achieved by highly skilled and experienced consultants. It is not certain, therefore, how successful other hospitals will be when adopting this intervention.

Volume 34, Number 12
December 2006

National Evaluation of Healthcare Provider Attitudes toward Organ Donation after Cardiac Death

M. Susan Mandell et al.

Objective: Organ donation after cardiac death will save lives by increasing the number of transplantable organs. But many health-care providers are reluctant to participate when the withdrawal of intensive care leads to organ donation. Prior surveys indicate ethical concerns as a barrier to the practice of organ donation after cardiac death, but the specific issues that characterize these concerns are unknown. The authors thus aimed to identify what barriers health-care providers perceive. *Design*: The authors conducted a qualitative analysis of focus group transcripts to identify issues of broad importance. *Setting*: Health-care setting. *Participants*: Participants included 141 health-care providers representing critical care and perioperative nurses, transplant surgeons, medical examiners, organ procurement personnel, neurosurgeons, and neurologists. *Interventions*: Collection and analysis of information regarding health-care providers' attitudes and beliefs. *Measurements and main results*: All focus groups agreed that increased organ availability is a benefit but questioned the quality of organs recovered. Study participants identified a lack of standards for patient prognostication and cardiopulmonary death and a failure to prevent a conflict between patient and donor interests as obstacles to acceptance of organ donation after cardiac death. They questioned the practices and motives of colleagues who participate in organ donation after cardiac death, apprehensive that real or perceived impropriety would affect public perception. *Conclusions*: Health-care providers are uncomfortable at the clinical juncture where end-of-life care and organ donation interface. The findings are consistent with theories that care providers are hesitant to perform medical tasks that they consider to be outside the focus of their practice, especially when there is potential conflict of interest. This conflict appears to impose moral distress on health-care providers and limits acceptance of organ donation after cardiac death. Future research is warranted to examine the effect of standardized procedures on reducing moral distress. The hypothesis generated by this qualitative study is that use of neutral third parties to broach the subject of organ donation may improve acceptance of organ donation after cardiac death.

Volume 34, Number 12
December 2006

Assessing Moral Distress in Respiratory Care Practitioners

Karen J. Schwenzer and Lijuan Wang

Objective: To test the reliability and validity of a modified moral distress tool, originally developed for the nursing profession, on respiratory care practitioners. To describe the relationship between moral distress, career

dissatisfaction, and job turnover in respiratory care. *Design*: A twenty-eight-question survey was developed. Three categories of survey questions were predefined: "individual responsibility," "not in the patient's best interest," and "deception." Additional questions measured career dissatisfaction, job turnover, and demographic information. *Setting*: University Hospital at the University of Virginia Health System, a 552-bed tertiary-care hospital. *Subjects*: Fifty-seven of 115 (49.6 percent) of respiratory care practitioners responded to the survey. *Interventions*: Exploratory factor analysis was used to investigate the underlying factor structure. After the authors extracted theoretically meaningful factors, reliability of each factor was estimated. Multiple regression analysis was conducted to test if the underlying factors predicted career dissatisfaction and job turnover. *Measurements and main results*: The factor analysis yielded a five-factor structure. Several questions in the "not in patient's best interest" category scored the highest moral distress, including disagreements with surrogate decision makers and provision of futile care. Higher scores were also found with questions regarding the perception of unsafe staffing and passive or active participation in deception. None of the demographic variables predicted career dissatisfaction or job turnover. However, the perception of unsafe staffing was found to be a significant factor in predicting career dissatisfaction and job turnover. *Conclusions*: In this one-center pilot study, respiratory care practitioners reported experiencing moral distress in many areas of their practice. Distress related to the perception of unsafe staffing may be related to career dissatisfaction and job turnover. Further exploration of the factors that contribute to respiratory care practitioners' moral distress is needed, as well as implementing ways to ameliorate it.

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February 2007

Taking Values Seriously: Ethical Challenges in Organ Donation and Transplantation for Critical Care Professionals

Mark P. Aulisio, Michael DeVita, and Donna Luebke

Last year, more than twenty-eight thousand people received organ transplants from more than fourteen thousand donors in the United States. Unfortunately, the waiting list now tops ninety-one thousand people, with the gap between recipient needs and available donor organs at around sixty thousand. This has motivated a host of efforts to increase organ supply, including driver's license and donor registry initiatives, educational and advertising campaigns, and "required request" and mandatory organ procurement organization notification when a patient's death is imminent. Other, more controversial efforts to increase the donor pool include expanded criteria for cadaveric donors, such as older or sicker donors and so-called non-heart-beating donation, now referred to as donation after cardiac death. Perhaps the most controversial of all efforts to address the organ shortage have focused on increasing the number of living organ donors, which in 2001 for the first time exceeded the number of cadaveric donors. Critical-care professionals know the sad reality behind the statistical scarcity of organ supply. They must manage anxious patients and family members who may be waiting for an organ that never comes, triage patients into and out of the intensive-care unit, and work through the propriety of shifting goals from cure to comfort when those same patients deteriorate to the point that transplant may no longer be an appropriate medical option or when a transplant fails. Equally significant ethical challenges arise on the donor side, whether it is working through difficult end-of-life decisions, identifying when to call the organ procurement organization, caring for brain-dead patients, managing a candidate for donation after cardiac death, or caring for a living donor postoperatively. This article discusses some of the difficult ethical challenges

raised by organ donation and transplantation for critical-care professionals, focusing on end-of-life decision making, donation after cardiac death, and living organ donation.

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February 2007

Ethical Considerations at the End of Life in the Intensive Care Unit

Jonathan R. Gavrin

Intensive care units confront the health-care system with end-of-life situations and ethical dilemmas surrounding death. It is necessary for all providers who treat dying patients to have a working knowledge of the philosophical principles that are fundamental to biomedical ethics. Those principles, however, are insufficient for compassionate care. To function well in the intensive care unit, one also must appreciate the behaviors that surround mortality. Human conduct is not predicated solely on rules; complex, unpredictable interactions are the norm. Palliative care, moving forward as a discipline, will become the perfect complement to intensive medical care, rather than being seen as an embodiment of its failures. We need to be as aggressive about respecting patient dignity as we are about using the technology that is central to health care. This article outlines end-of-life ethical principles, explores the sociology that influences human interactions in intensive-care units, and shows how palliative care should guide behaviors to improve how we deal with death.

Current Opinion in Obstetrics and Gynecology

Volume 19, Number 1
February 2007

Prophylactic Oophorectomy in Women at Increased Cancer Risk

Susan M. Domchek and Timothy R. Rebbeck

Purpose of review: Bilateral prophylactic salpingo-oophorectomy (BPSO) is widely used for cancer risk reduction in women with BRCA1/2 mutations. BPSO significantly reduces breast cancer risk by approximately 50 percent and ovarian cancer risk by 80 to 95 percent but may be accompanied by menopausal symptoms, impaired quality of life, and accelerated bone loss. Therefore, decisions regarding the timing of BPSO and the use of post-BPSO hormone replacement therapy must be carefully considered. *Recent findings*: Over the last year, studies have further examined issues related to quality of life associated with BPSO and have demonstrated that hormone replacement therapy following BPSO in unaffected women does not negate the breast cancer risk reduction that BPSO provides. Studies have provided additional information on the residual risk of cancer following BPSO, have demonstrated its benefit in Lynch syndrome, and have suggested a short-term mortality benefit following BPSO in BRCA1/2 mutation carriers. *Summary*: The authors review the recent studies regarding BPSO and their implications for the clinical management of women who are at increased cancer risk.

JAMA: Journal of the American Medical Association

Volume 296, Number 22
December 13, 2006

Preimplantation Genetic Diagnosis for Cancer Syndromes: A New Challenge for Preventive Medicine

Kenneth Offit, Michal Sagi, and Karen Hurley

Over the next decade, health-care professionals may increasingly be involved in discussions of reproductive options when providing preventive medicine guidance to patients and their families affected by hereditary cancer syndromes. Preimplantation genetic diagnosis (PGD) is one means of assisted reproductive technology (ART) wherein embryos that do not inherit a familial mutation are selected for implantation and gestation. Recently, the au-

thors documented fifty-five published reports as well as unpublished experiences using ART for twenty-two common predisposition syndromes, including hereditary breast, ovarian, and colon cancer. Because progress in PGD has occurred only recently, guiding reproductive choice with cancer genetic tests has not been included in professional guidelines. In this article the authors outline some of the regulatory, ethical, and social issues raised by the introduction of PGD into routine care of families affected by hereditary cancer. They offer an analytic framework to address these issues, taking into account medical and psychosocial considerations that may contribute to responsible translation of this technology into the practice of preventive medicine.

The Lancet

Volume 369, Number 9557
January 20, 2007

Effect of Three-Year Folic Acid Supplementation on Cognitive Function in Older Adults in the FACIT Trial: A Randomised, Double Blind, Controlled Trial

Jane Durga et al.

Background: Low folate and raised homocysteine concentrations in blood are associated with poor cognitive performance in the general population. As part of the FACIT trial to assess the effect of folic acid on markers of atherosclerosis in men and women aged fifty to seventy years with raised plasma total homocysteine and normal serum vitamin B12 at screening, the authors report the findings for the secondary endpoint: the effect of folic acid supplementation on cognitive performance. *Methods*: This randomized, double-blind, placebo controlled study took place between November 1999 and December 2004, in the Netherlands. The authors randomly assigned 818 participants 800 micrograms daily oral folic acid or placebo for three years. The effect on cognitive performance was measured as the difference between the two groups in the three-year change in performance for memory, sensorimotor speed, complex speed, information processing speed, and word fluency. Analysis was by intention-to-treat. This trial is registered with clinicaltrials.gov with trial number NCT00110604. *Findings*: Serum folate concentrations increased by 576 percent (95% CI, 539–614) and plasma total homocysteine concentrations decreased by 26 percent (24–28) in participants taking folic acid compared with those taking placebo. The three-year change in memory (difference in Z scores, 0.132; 95% CI, 0.032–0.233), information processing speed (0.087; 0.016–0.158), and sensorimotor speed (0.064; -0.001 to 0.129) were significantly better in the folic acid group than in the placebo group. *Interpretation*: Folic acid supplementation for three years significantly improved domains of cognitive function that tend to decline with age.

Volume 369, Issue 9561
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Effect of Exposure to Traffic on Lung Development from 10 to 18 Years of Age: A Cohort Study

W. James Gauderman et al.

Background: Whether local exposure to major roadways adversely affects lung-function growth during the period of rapid lung development that takes place between ten and eighteen years of age is unknown. This study investigated the association between residential exposure to traffic and eight-year lung-function growth. *Methods:* In this prospective study, 3,677 children (mean age, ten years [SD, 0.44]) participated from twelve southern California communities that represent a wide range in regional air quality. Children were followed up for eight years, with yearly lung-function measurements recorded. For each child, the authors identified several indicators of residential exposure to traffic from large roads. Regression analysis was used to establish whether eight-year growth in lung function was associated with local traffic exposure, and whether local traffic effects were independent of regional air quality. *Findings:* Children who lived within five hundred meters of a freeway (motorway)

had substantial deficits in eight-year growth of forced expiratory volume in one second (FEV1, -81 milliliter; p = 0.01 [95% CI, -143 to -18]) and maximum mid-expiratory flow rate (MMEF, -127 milliliter/second; p = 0.03 [-243 to -11]) compared with children who lived at least fifteen hundred meters from a freeway. Joint models showed that both local exposure to freeways and regional air pollution had detrimental, and independent, effects on lung-function growth. Pronounced deficits in attained lung function at age eighteen years were recorded for those living within five hundred meters of a freeway, with mean percent-predicted 97.0 percent for FEV1 (p = 0.013, relative to >1,500 meter [95% CI, 94.6–99.4]) and 93.4 percent for MMEF (p = 0.006 [95% CI, 89.1–97.7]). *Interpretation:* Local exposure to traffic on a freeway has adverse effects on children's lung development, which are independent of regional air quality, and which could result in important deficits in attained lung function in later life.

New England Journal of Medicine

Volume 355, Number 22
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Financial Relationships between Institutional Review Board Members and Industry

Eric G. Campbell et al.

Background: Little is known about the nature, extent, and consequences of financial relationships between industry and institutional review board (IRB) members in academic institutions. The authors surveyed IRB members about such relationships. *Methods*: The authors surveyed a random sample of 893 IRB members at one hundred academic institutions (response rate, 67.2 percent). The questionnaire focused on the financial relationships that the members had with industry (e.g., employment, membership on boards, consulting, receipt of royalties, and paid speaking). *Results*: The authors found that 36 percent of IRB members had had at least one relationship with industry in the past year. Of the respondents, 85.5 percent said they never thought that the relationships that another IRB member had with industry affected his or her IRB-related decisions in an inappropriate way, 11.9 percent said they thought this occurred rarely, 2.4 percent thought it occurred sometimes, and 0.2 percent thought it occurred often. Seventy-eight respondents (15.1 percent) reported that at least one protocol came before their IRB during the previous year that was sponsored either by a company with which they had a relationship or by a competitor of that company, both of which could be considered conflicts of interest. Of these seventy-eight members (sixty-two voting members and sixteen nonvoting members), 57.7 percent reported that they always disclosed the relationship to an IRB official, 7.7 percent said they sometimes did, 11.5 percent said they rarely did, and 23.1 percent said they never did. Of the sixty-two voting members who reported conflicts, 64.5 percent reported that they never voted on the protocol, 4.8 percent said they rarely did, 11.3 percent said they sometimes did, and 19.4 percent said they always did. Most respondents reported that the views of IRB members who had experience working with industry were beneficial in reviewing industry-sponsored protocols. *Conclusions*: Relationships between IRB members and industry are common, and members sometimes participate in decisions about protocols sponsored by companies with which they have a financial relationship. Current regulations and policies should be examined to be sure that there is an appropriate way to handle conflicts of interest stemming from relationships with industry.

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Patients' Views on Financial Conflicts of Interest in Cancer Research Trials

Lindsay A. Hampson et al.

Background: Financial ties between researchers or medical centers and companies whose drugs are being tested have come under increasing scrutiny. *Methods*: The authors conducted in-person interviews with 253

patients in cancer-research trials (a 93 percent response rate) at five U.S. medical centers to determine their attitudes regarding potential financial conflicts of interest among researchers and medical centers. *Results*: More than 90 percent of patients expressed little or no worry about financial ties that researchers or institutions might have with drug companies. Most patients said they would have enrolled in the trial even if the drug company had paid the researcher for speaking (82 percent of those interviewed) or consulting (75 percent) or if the researcher had received royalty payments (70 percent) or owned stock in the company (76 percent). Similarly, most patients would have enrolled in the trial if their cancer center had owned stock in the drug company (77 percent) or received royalty payments from the company (79 percent). Most patients believed it was ethical for researchers to receive speaking fees (81 percent) or consulting fees (82 percent) from the company. However, a substantial minority of patients wanted disclosure of the oversight system for researchers (40 percent) and of researchers' financial interests (31 percent); 17 percent thought no disclosure to patients was necessary. *Conclusions*: Most patients in cancer-research trials were not worried about financial ties between researchers or medical centers and drug companies and would still have enrolled in the trial if they had known about such financial ties. A substantial minority wanted to be informed about the oversight system to protect against financial conflicts of interest and about researchers' financial interests.

Volume 356, Number 4
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In Vitro Fertilization

Bradley J. Van Voorhis

The article begins with a case vignette highlighting a common clinical problem. Evidence supporting various strategies is presented, followed by a review of formal guidelines, when they exist. The article ends with the author's clinical recommendations. This is the case vignette: A thirty-seven-year-old woman who has never been pregnant and her forty-year-old husband have been attempting to conceive a child for the past three years. An infertility evaluation has shown no cause for the difficulty. The woman is ovulating regularly, and a hysterosalpingogram shows that her reproductive tract is anatomically normal. The man has a normal sperm count; he has not fathered any children. They are frustrated and want to proceed with in vitro fertilization What should you advise?

Volume 356, Number 6
February 8, 2007

Religion, Conscience, and Controversial Clinical Practices

Farr A. Curlin et al.

Background: There is a heated debate about whether health professionals may refuse to provide treatments to which they object on moral grounds. It is important to understand how physicians think about their ethical rights and obligations when such conflicts emerge in clinical practice. *Methods*: The authors conducted a cross-sectional survey of a stratified, random sample of two thousand practicing U.S. physicians from all specialties by mail. The primary criterion variables were physicians' judgments about their ethical rights and obligations when patients request a legal medical procedure to which the physician objects for religious or moral reasons. These procedures included administering terminal sedation in dying patients, providing abortion for failed contraception, and prescribing birth control to adolescents without parental approval. *Results*: A total of 1,144 of 1,820 physicians (63 percent) responded to the survey. On the basis of the results, the authors estimate that most physicians believe that it is ethically permissible for doctors to explain their moral objections to patients (63 percent). Most also believe that physicians are obligated to present all options (86 percent) and to refer the patient to another clinician who does not object to the requested procedure (71 percent). Physicians who were male, those who were religious, and those who had personal objections to morally controversial clinical practices were less likely to report that doctors must disclose information about or refer patients for medical

procedures to which the physician objected on moral grounds (multivariate odds ratios, 0.3–0.5). *Conclusions*: Many physicians do not consider themselves obligated to disclose information about or refer patients for legal but morally controversial medical procedures. Patients who want information about and access to such procedures may need to inquire proactively to determine whether their physicians would accommodate such requests.

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Ethical Challenges Posed by the Solicitation of Deceased and Living Organ Donors

Douglas W. Hanto

Given the shortage of transplantable organs, some potential recipients are going to great lengths to find organ donors on their own. For example, a patient with advanced liver cancer advertised on a personal Web site, billboards, and in the media for a liver, leading the family of a brain-dead donor to direct the donor's liver to him. A patient undergoing dialysis solicited on a commercial Web site and received a kidney from a volunteer living donor. The solicitation for organs from deceased and living donors potentially circumvents the principles of justice and utility on which organ-allocation policies are based and has sparked a vigorous public debate. In this article, the author reviews the medical, ethical, and public policy issues involved in solicitation and offers possible solutions.

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The Ethics and Politics of Compulsory HPV Vaccination

James Colgrove

On September 12, 2006, three months after the Food and Drug Administration licensed a vaccine against human papillomavirus (HPV), Michigan lawmakers became the first in the United States to propose that vaccination be compulsory for girls entering sixth grade. Parents who objected would be able to opt out of the requirement under the same provisions that apply to other vaccinations. The bill passed the state senate by an overwhelming margin a week later and awaits consideration by the house. Other states are likely to follow Michigan's lead.