



Alex Macario MD MBA

Professor of Anesthesiology, Perioperative and Pain Medicine and, by courtesy, of Health Research and Policy at the Stanford University Medical Center

CLINICAL OFFICES

- **Anesthesia**

300 Pasteur Dr Rm H3580

MC 5640

Stanford, CA 94305

Tel (650) 723-6411 **Fax** (650) 725-8544

Bio

BIO

Alex Macario, MD, MBA is vice-chair for education and professor in the Department of Anesthesiology, Perioperative and Pain Medicine at the Stanford University School of Medicine, where he is also professor by courtesy in the Department of Health Research and Policy. Dr. Macario serves as Program Director for the Anesthesiology Residency, which has more than 90 housestaff.

Dr. Macario completed his undergraduate, medical school and business school education at the University of Rochester with the Joseph C. Wilson Merit Scholarship. He then trained in anesthesiology at Stanford University, served as Chief Resident, and completed a postgraduate fellowship in health services research. Dr. Macario's clinical practice is in the general operating room and includes a variety of inpatients and ambulatory patients having surgery.

Dr. Macario has received several awards, including being the inaugural recipient of the Outstanding Contribution to Graduate Medical Education as Program Director Award for the Stanford University Medical Center. He also has been nationally recognized with the Excellence in Education Award from the American Society of Anesthesiologists for exceptional contributions to graduate medical education.

A member of the faculty at Stanford since 1995, Dr. Macario established an internationally recognized academic program in operating room management, including creating the Management of Perioperative Services Fellowship. Dr. Macario also designed and led other innovative educational programs, including the Stanford Fellowship in Anesthesia Research and Medicine track for anesthesia residents who want to pursue research-intensive careers, many of whom have gone on to obtain National Institutes of Health funding. He also serves as program director for the Combined Residency in Internal Medicine and Anesthesiology and is associate program director for the Combined Residency in Pediatrics and Anesthesiology. Additionally, Dr. Macario was founder and served as director of the Stanford Anesthesia Faculty Teaching Scholars Program, which launched a structure for department faculty to obtain education in teaching, curriculum development, and assessment.

Dr. Macario's research career has been dedicated to the economics of health care, in particular the tradeoffs between costs and outcomes for patients having surgery and anesthesia. Dr. Macario helped develop the scientific study of the management of the operating room suite, as well as pioneering work on the cost-effectiveness of drugs and devices. More recently, Dr. Macario's research team has focused on medical education. Dr. Macario's research has led to more than 135 peer reviewed

publications and more than 9,000 citations. Google Scholar calculates Dr. Macario's H-Index as 51 and his I-10 Index as 117. An index of h indicates an investigator has published h papers each of which has been cited in other papers at least h times.

Dr. Macario serves as director for the American Board of Anesthesiology, and is a member of the Anesthesiology Review Committee for the ACGME.

Dr. Macario authored "A Sabbatical in Madrid: A Diary of Spain," an award winning travel memoir. Dr. Macario has two adult children working in San Francisco and lives with his wife in their home on the Stanford Campus. In his free time, Dr. Macario enjoys rooting for Stanford sports, biking up the local hills, and playing tennis.

Why I Became an Anesthesiologist is available at <http://www.medscape.com/viewarticle/881001>

CLINICAL FOCUS

- Multispecialty including for example anesthesia for orthopedics, urology, neurosurgery, ambulatory surgery, and general surgery
- Anesthesia

ACADEMIC APPOINTMENTS

- Professor - Med Center Line, Anesthesiology, Perioperative and Pain Medicine
- Professor - Med Center Line (By courtesy), Health Research & Policy
- Member, Bio-X

ADMINISTRATIVE APPOINTMENTS

- Program Director, Combined Internal Medicine-Anesthesiology residency, (2013- present)
- Associate Program Director, Combined Pediatrics and Anesthesiology Residency, (2010- present)
- Founder, Faculty Teaching Scholars Program, Department of Anesthesiology, (2007-2017)
- Director, CME Grand Rounds Program, Department of Anesthesiology, (2010- present)
- Executive Committee, Faculty Senate, Stanford University School of Medicine, (2007-2012)
- Program Director, Anesthesiology Residency, (2006- present)
- Vice-Chairman for Education, Department of Anesthesiology, (2006- present)
- Finance Committee, Dept of Anesthesiology, (2003- present)
- Visiting Professor, TAISS, Madrid, Spain, (2001-2002)
- Governance Committee, Dept. of Anesthesiology, (1997- present)
- Program Director, Management of Perioperative Services Fellowship, (1996- present)

HONORS AND AWARDS

- Excellence in Education Award (one national awardee per year), American Society of Anesthesiologists (2018)
- Global Health Grant: Collaboration in Zimbabwe for anesthesiologist training and education research, Sponsor: Office of International Affairs, Stanford University (2015)
- Inaugural recipient, Outstanding Contribution to Graduate Medical Education as Program Director, Stanford University (2015)
- Medical technology grant: A monitoring system to prevent unnecessary blood wastage, Sponsor: Stanford Center for Clinical and Translational Research and Education (2015)
- Faculty Mentor Award, American Society of Anesthesiology, Committee on Professional Diversity (2012-2013)
- Charter member, Education Academy, Foundation for Anesthesia Education & Research (2012)
- Education Advisory Board, Association of University Anesthesiologists (2012)
- First place, "best article", Journal of Medical Internet Research: 4th World Congress on Social Media & Web 2.0 Health & Medicine (2012)

- Ellis N. Cohen Achievement Award (Department of Anesthesiology highest honor), Stanford University (2009)
- Keynote speaker, American Association of Clinical Directors Annual Meeting (2007)
- 1st place, Literature Prize, American Society of Anesthesiology Annual Meeting (2004)
- Research Incentive Award, Testing a secure Web based, decision support system for anesthesia, Stanford University Office of Technology Licensing (2001-2002)
- Principal Investigator for grant on patient preferences for postoperative outcomes, Foundation for Anesthesia Education Research (1998)
- Annual Resident Research Prize, 3rd Place, American Society of Anesthesiologists (1995)
- Valdes - Dapena Research Prize, The Graduate Hospital, University of Pennsylvania (1991)
- Graduation Speaker, College of Arts & Sciences, University of Rochester (1986)
- Phi Beta Kappa, University of Rochester (1986)
- Rigby - Wile Prize in Biology, University of Rochester (1985)
- Joseph C. Wilson Scholar, University of Rochester (1982)
- Excellence in Education Award, American Society of Anesthesiologists (2018)

BOARDS, ADVISORY COMMITTEES, PROFESSIONAL ORGANIZATIONS

- Member, ACGME Anesthesiology Review Committee (2019 - present)
- Director, Board of Directors, American Board of Anesthesiology (2017 - present)
- Examiner, American Board of Anesthesiology (2011 - present)
- Editorial Board, Medscape Anesthesiology website at <http://www.medscape.com/anesthesiology> (2010 - 2019)
- Member, Association of University Anesthesiologists (honorific society) (2000 - present)
- Editorial Board, Anesthesiology News (1999 - 2019)

PROFESSIONAL EDUCATION

- Residency: Stanford University Anesthesiology Residency (1994) CA
- Internship: Graduate Hospital (Closed) (1991) PA
- Board Certification: Anesthesia, American Board of Anesthesiology (1995)
- Fellowship: Stanford University Medical Center (1995) CA
- Medical Education: University of Rochester (1990) NY
- Chief Resident, Stanford University , Anesthesiology (1994)
- MBA, University of Rochester , Health Economics (1988)
- BA, University of Rochester , Sociology (1986)

COMMUNITY AND INTERNATIONAL WORK

- Zimbabwe Global Health elective for anesthesia residency
- Postgraduate Fellowship in Global Health
- Global Health Trip 1994, Vietnam

LINKS

- Media Interview, Barcelona: <http://www.youtube.com/watch?v=y8kLL7dKQ08>
- Education Blog: <http://med.stanford.edu/askalex/>
- Podcast: Being a Physician MBA. An interview with Dr. Alex Macario: <https://itunes.apple.com/us/podcast/the-undifferentiated-medical-student/id1173721448?mt=2&i=1000391186431>
- Twitter: <https://twitter.com/alexmacario>

- Management Fellowship: <https://surgicalhome.stanford.edu/>
- New York Times interview: http://www.nytimes.com/2006/07/18/health/18tech.html?_r=1&
- Youtube video of talk on economics of the operating room: https://m.youtube.com/watch?v=u_f-eH68Kvg
- Youtube video of talk on utilization of the OR: <https://m.youtube.com/watch?v=Kf99KYRG18>
- Dr. Macario's most frequently cited papers as per Google Scholar: https://scholar.google.com/citations?view_op=list_works&hl=en&user=BGLZ_YMAAAAJ
- Q and A Videos with Dr. Macario about the Stanford Anesthesia Residency: <https://www.youtube.com/playlist?list=PLpGHT1n4-mAtMvguqa7mye5EnKbmy8AX5>
- Why I Became an Anesthesiologist: <http://www.medscape.com/viewarticle/881001>
- Press release American Society of Anesthesiologists: <https://www.asahq.org/about-asa/newsroom/news-releases/2018/10/excellence-in-education-award>

Research & Scholarship

CURRENT RESEARCH AND SCHOLARLY INTERESTS

Dr. Macario studies health care economics and outcomes, with a special focus on surgery and anesthesia.

Dr. Macario is well known for helping develop the field of operating room management.

He is also passionate about cost-effectiveness analyses of drugs and devices.

For the past decade Dr. Macario has added research in medical education as a key focus to better understand methods to best teach residents.

Google Scholar calculates Dr. Macario's H-Index as 52 and his I-10 as 119, with 9000 total citations.

CLINICAL TRIALS

- A Randomized Controlled Study of Rolapitant for the Prevention of Nausea and Vomiting Following Surgery (Study P04937AM1)(COMPLETED), Not Recruiting

PROJECTS

- Collaboration in Zimbabwe for anesthesiologist training and education research - Stanford University, Department of Anesthesiology

Teaching

STANFORD ADVISEES

Postdoctoral Faculty Sponsor

Stuart Solomon, Jennifer Yuan

GRADUATE AND FELLOWSHIP PROGRAM AFFILIATIONS

- Anesthesia (Fellowship Program)
- Cardiac Anesthesia (Fellowship Program)
- Critical Care Medicine (Fellowship Program)
- Health Services Research (Masters Program)
- Obstetric Anesthesia (Fellowship Program)
- Pain Management (Fellowship Program)
- Pediatric Anesthesia (Fellowship Program)

Publications

PUBLICATIONS

- **Predictors of post-anaesthesiology residency research productivity: preliminary report.** *British journal of anaesthesia*
Haight, E. S., Chen, F., Tanaka, P., Brock-Utne, J. G., Macario, A., Sun, E. C., Tawfik, V. L.
2019
- **Association Between Participation and Performance in MOCA Minute and Actions Against the Medical Licenses of Anesthesiologists.** *Anesthesia and analgesia*
Zhou, Y., Sun, H., Macario, A., Keegan, M. T., Patterson, A. J., Minhaj, M. M., Wang, T., Harman, A. E., Warner, D. O.
2019
- **Assessing the Workplace Culture and Learning Climate in the Inpatient Operating Room Suite at an Academic Medical Center** *JOURNAL OF SURGICAL EDUCATION*
Tanaka, P., Hasan, N., Tseng, A., Tran, C., Macario, A., Harris, I.
2019; 76 (3): 644–51
- **Evolving Board Certification - Glimpses of Success.** *The New England journal of medicine*
Macario, A., Harman, A. E., Hosansky, T., Post, M. E., Sun, H., McMahan, G. T.
2019; 380 (2): 115–18
- **Repeated Cross-sectional Surveys of Burnout, Distress, and Depression among Anesthesiology Residents and First-year Graduates.** *Anesthesiology*
Sun, H., Warner, D. O., Macario, A., Zhou, Y., Culley, D. J., Keegan, M. T.
2019
- **The American Board of Anesthesiology's Standardized Oral Examination for Initial Board Certification.** *Anesthesia and analgesia*
Sun, H., Warner, D. O., Patterson, A. J., Harman, A. E., Rathmell, J. P., Keegan, M. T., Dainer, R. J., McLoughlin, T. M., Fahy, B. G., Macario, A.
2019
- **The American Board of Anesthesiology Staged Examination System and Performance on the Written Certification Examination After Residency.** *Anesthesia and analgesia*
Zhou, Y., Sun, H., Macario, A., Martin, D. E., Rathmell, J. P., Warner, D. O.
2019
- **Analysis of Milestone-based End-of-rotation Evaluations for Ten Residents Completing a Three-year Anesthesiology Residency.** *Cureus*
Chemtob, C. M., Tanaka, P., Keil, M., Macario, A.
2018; 10 (8): e3200
- **Association between Performance in a Maintenance of Certification Program and Disciplinary Actions against the Medical Licenses of Anesthesiologists.** *Anesthesiology*
Zhou, Y., Sun, H., Macario, A., Keegan, M. T., Patterson, A. J., Minhaj, M. M., Wang, T., Harman, A. E., Warner, D. O.
2018
- **What Makes for Good Anesthesia Teaching by Faculty in the Operating Room? The Perspective of Anesthesiology Residents.** *Cureus*
Wakatsuki, S., Tanaka, P., Vinagre, R., Marty, A., Thomsen, J. L., Macario, A.
2018; 10 (5): e2563
- **Development of an Objective Structured Clinical Examination Using the American Board of Anesthesiology Content Outline for the Objective Structured Clinical Examination Component of the APPLIED Certification Examination.** *A&A practice*
Tanaka, P., Adriano, A., Ngai, L., Park, Y. S., Marty, A., Wakatsuki, S., Brun, C., Harrison, K., Bushell, E., Thomsen, J. L., Wen, L., Painter, C., Chen, et al
2018
- **Commentary: How Should Hospitals Respond to Surgeons' Requests to Schedule Overlapping Surgeries?** *Neurosurgery*
Morris, A. J., Mello, M. M., Sanford, J. A., Green, R. B., Wald, S. H., Kadry, B., Macario, A.
2018; 82 (4): E91–E98
- **Cost-benefit Analysis of Maintaining a Fully Stocked Malignant Hyperthermia Cart versus an Initial Dantrolene Treatment Dose for Maternity Units.** *Anesthesiology*
Ho, P. T., Carvalho, B., Sun, E. C., Macario, A., Riley, E. T.

2018

- **Advances and challenges in postgraduate anesthesia education** *Journal of Head & Neck Anesthesia*
Tanaka, P., Macario, A.
2018: 1-3
- **Overlapping Surgery: A Case Study in Operating Room Throughput and Efficiency.** *Anesthesiology clinics*
Morris, A. J., Sanford, J. A., Damrose, E. J., Wald, S. H., Kadry, B., Macario, A.
2018; 36 (2): 161–76
- **Cancellation of Elective Cases in a Recently Opened, Tertiary/Quaternary-Level Hospital in the Middle East.** *Anesthesia and analgesia*
Morris, A. J., McAvoy, J., Dweik, D., Ferrigno, M., Macario, A., Haisjackl, M.
2017
- **Comparing Anesthesiology Residency Training Structure and Requirements in Seven Different Countries on Three Continents.** *Cureus*
Yamamoto, S., Tanaka, P., Madsen, M. V., Macario, A.
2017; 9 (2)
- **Implementation of a Needs-Based, Online Feedback Tool for Anesthesia Residents With Subsequent Mapping of the Feedback to the ACGME Milestones** *ANESTHESIA AND ANALGESIA*
Tanaka, P., Merrell, S. B., Walker, K., Zocca, J., Scotto, L., Bogetz, A. L., Macario, A.
2017; 124 (2): 627-635
- **Occupational Radiation Exposure of Anesthesia Providers.** *Seminars in cardiothoracic and vascular anesthesia*
Wang, R. R., Kumar, A. H., Tanaka, P., Macario, A.
2017: 1089253217692110-?
- **Implementation of a Needs-Based, Online Feedback Tool for Anesthesia Residents With Subsequent Mapping of the Feedback to the ACGME Milestones.** *Anesthesia and analgesia*
Tanaka, P., Bereknyci Merrell, S., Walker, K., Zocca, J., Scotto, L., Bogetz, A. L., Macario, A.
2017; 124 (2): 627-635
- **Does Faculty Follow the Recommended Structure for a New Classroom-based, Daily Formal Teaching Session for Anesthesia Residents?** *Cureus*
Anwar, A., Tanaka, P., Madsen, M. V., Macario, A.
2016; 8 (10)
- **Mapping of Primary Instructional Methods and Teaching Techniques for Regularly Scheduled, Formal Teaching Sessions in an Anesthesia Residency Program.** *A & A case reports*
Vested Madsen, M., Macario, A., Yamamoto, S., Tanaka, P.
2016; 6 (11): 343-347
- **Analysis of Resident Case Logs in an Anesthesiology Residency Program.** *A & A case reports*
Yamamoto, S., Tanaka, P., Madsen, M. V., Macario, A.
2016; 6 (8): 257-262
- **The Heart of the Matter: Increasing Quality and Charge Capture from Intraoperative Transesophageal Echocardiography.** *A & A case reports*
Sanford, J. A., Kadry, B., Oakes, D., Macario, A., Schmiesing, C.
2016; 6 (8): 249-252
- **Impact of an Innovative Classroom-Based Lecture Series on Residents' Evaluations of an Anesthesiology Rotation.** *Anesthesiology research and practice*
Tanaka, P., Yanez, D., Lemmens, H., Djurdjulov, A., Scotto, L., Borg, L., Walker, K., Bereknyci Merrell, S., Macario, A.
2016; 2016: 8543809-?
- **Examining Health Care Costs: Opportunities to Provide Value in the Intensive Care Unit.** *Anesthesiology clinics*
Chang, B., Lorenzo, J., Macario, A.
2015; 33 (4): 753-770
- **In Response.** *Anesthesia and analgesia*
Downey, L., Blaine, K., Sliwa, J., Macario, A., Brock-Utne, J.
2015; 121 (4): 1113-?

- **A Case Illustrating the Costs of Quality Improvement: Nine Months to Move Needles and Syringes on the Anesthesia Cart.** *A & A case reports*
Quick, A. K., Macario, A., Brock-Utne, J. G., Jaffe, R. A., Kadry, B.
2015; 5 (5): 88-90
- **No Significant Association between Anesthesia Group Concentration and Private Insurer Payments in the United States** *ANESTHESIOLOGY*
Sun, E. C., Dexter, F., Macario, A., Miller, T. R., Baker, L. C.
2015; 123 (3): 507-514
- **Bariatric Surgery Operating Room Time-Size Matters** *OBESITY SURGERY*
Sanford, J. A., Kadry, B., Brodsky, J. B., Macario, A.
2015; 25 (6): 1078-1085
- **Ambulatory Continuous Peripheral Nerve Blocks and the Perioperative Surgical Home.** *Anesthesiology*
Ilfeld, B. M., Meunier, M. J., Macario, A.
2015; 123 (6): 1224-26
- **Positive end-expiratory pressure to increase internal jugular vein size is poorly tolerated in obese anesthetized adults.** *Anesthesia and analgesia*
Downey, L. A., Blaine, K. P., Sliwa, J., Macario, A., Brock-Utne, J.
2014; 119 (3): 619-621
- **Data, data, on the server: challenges in applying data analysis to operating room management.** *Anesthesiology*
Sanford, J. A., Macario, A.
2014; 121 (1): 6-8
- **Scheduling of procedures and staff in an ambulatory surgery center.** *Anesthesiology clinics*
Pash, J., Kadry, B., Bugarra, S., Macario, A.
2014; 32 (2): 517-527
- **In response.** *Anesthesia and analgesia*
Macario, A., Carvalho, B., Tan, J. M., Sultan, P., El-Sayed, Y. Y.
2014; 118 (4): 884-885
- **Economic Burden of Back and Neck Pain: Effect of a Neuropathic Component.** *Population health management*
Kleinman, N., Patel, A. A., Benson, C., Macario, A., Kim, M., Biondi, D. M.
2014
- **Obesity increases operating room times in patients undergoing primary hip arthroplasty: a retrospective cohort analysis.** *PeerJ*
Kadry, B., Press, C. D., Alish, H., Opper, I. M., Orsini, J., Popov, I. A., Brodsky, J. B., Macario, A.
2014; 2
- **Obesity increases operating room times in patients undergoing primary hip arthroplasty: a retrospective cohort analysis.** *PeerJ*
Kadry, B., Press, C. D., Alish, H., Opper, I. M., Orsini, J., Popov, I. A., Brodsky, J. B., Macario, A.
2014; 2
- **Simulation-based mastery learning with deliberate practice improves clinical performance in spinal anesthesia.** *Anesthesiology research and practice*
Udani, A. D., Macario, A., Nandagopal, K., Tanaka, M. A., Tanaka, P. P.
2014; 2014: 659160-?
- **Implementing operating room management science: From the bench to the scheduling office.** *European journal of anaesthesiology*
Macario, A.
2014; 31 (7): 355-60
- **Can physician performance be assessed via simulation?** *Anesthesiology*
Macario, A.
2014; 120 (1): 18-21
- **Opiates for Chronic Pain Management and Surgical Considerations** *Essentials of Pharmacology for Anesthesia, Pain Medicine, and Critical Care*
Esaki, R., Macario, A.
Springer.2014; 1

- **Brief report: a cost analysis of neuraxial anesthesia to facilitate external cephalic version for breech fetal presentation.** *Anesthesia and analgesia*
Carvalho, B., Tan, J. M., Macario, A., El-Sayed, Y. Y., Sultan, P.
2013; 117 (1): 155-159
- **A Cost Analysis of Neuraxial Anesthesia to Facilitate External Cephalic Version for Breech Fetal Presentation** *ANESTHESIA AND ANALGESIA*
Carvalho, B., Tan, J. M., Macario, A., El-Sayed, Y. Y., Sultan, P.
2013; 117 (1): 155-159
- **The stanford anesthesia faculty teaching scholars program: summary of faculty development, projects, and outcomes.** *Journal of graduate medical education*
Macario, A., Tanaka, P. P., Landy, J. S., Clark, S. M., Pearl, R. G.
2013; 5 (2): 294-298
- **The Use of Facebook Among Seventy-Seven Departments of Anesthesia in United States Medical Schools** *Cureus*
Landy, J., Macario, A.
2013
- **Use of Tablet (iPad (R)) as a Tool for Teaching Anesthesiology in an Orthopedic Rotation** *REVISTA BRASILEIRA DE ANESTESIOLOGIA*
Tanaka, P. P., Hawrylyshyn, K. A., Macario, A.
2012; 62 (2): 214-222
- **Anesthesia Information Management Systems: Past, Present, and Future of Anesthesia Records** *MOUNT SINAI JOURNAL OF MEDICINE*
Kadry, B., Feaster, W. W., Macario, A., Ehrenfeld, J. M.
2012; 79 (1): 154-165
- **The Timing of Staffing Decisions in Hospital Operating Rooms: Incorporating Workload Heterogeneity into the Newsvendor Problem** *M&SOM-MANUFACTURING & SERVICE OPERATIONS MANAGEMENT*
He, B., Dexter, F., Macario, A., Zenios, S.
2012; 14 (1): 99-114
- **Cost identification analysis of anesthesia fiberscope use for tracheal intubation** *Journal of Anesthesia & Clinical Research*
Liu, S., Brodsky, J., Macario, A.
2012; 3 (5): 1-4
- **Book Review: ANESTHESIOLOGY CLINICS - Quality of Anesthesia Care** *Anesthesia & Analgesia*
Santiago, J., Macario, A.
2012; 114 (6): 1371
- **Leadership Principles** *Operating Room Leadership and Management*
Egger Halbeis, C., Macario, A.
Cambridge University Press.2012; 1: 1-15
- **The timing of staffing decisions in hospital operating room: incorporating workload heterogeneity into the newsvendor problem** *Manufacturing & Service Operations Management*
He, B., Dexter, F., Macario, A., Zenios, S.
2012; 14: 99-114
- **Technology and Anesthesia Education** *Technology and Anesthesia Education.*
Tanaka, P., Macario, A.
2012: e101
- **Smart Device Use Among Resident Physicians at Stanford Hospital** *Cureus*
Ositelu, O., Landy, J., Kadry, B., Macario, A.
2012; 4 (12)
- **Vaporizers** *The Anesthesia Technician and Technologist's Manual: All You Need to Know for Study and Reference*
Esaki, R., Macario, A.
Lippincott Williams & Wilkins.2012; 1: 247-254
- **Analysis of 4999 Online Physician Ratings Indicates That Most Patients Give Physicians a Favorable Rating** *JOURNAL OF MEDICAL INTERNET RESEARCH*

- Kadry, B., Chu, L. F., Kadry, B., Gammas, D., Macario, A.
2011; 13 (4)
- **TITRATION OF SEVOFLURANE IN ELDERLY PATIENTS: BLINDED, RANDOMIZED CLINICAL TRIAL, IN NON-CARDIAC SURGERY AFTER BETA-ADRENERGIC BLOCKADE** *JOURNAL OF CLINICAL MONITORING AND COMPUTING*
Drover, D. R., Schmiesing, C., Buchin, A. F., Ortega, H. R., Tanner, J. W., Atkins, J. H., Macario, A.
2011; 25 (3): 175-181
 - **A Literature Review of Randomized Clinical Trials of Intravenous Acetaminophen (Paracetamol) for Acute Postoperative Pain** *PAIN PRACTICE*
Macario, A., Royal, M. A.
2011; 11 (3): 290-296
 - **The IRB Process Needs to Be Reexamined** *ANESTHESIA AND ANALGESIA*
Esaki, R., Macario, A., Harrison, T. K., Brock-Utne, J. G.
2011; 112 (5): 1249-1250
 - **Self-Reported Information Needs of Anesthesia Residency Applicants and Analysis of Applicant-Related Web Sites Resources at 131 United States Training Programs** *ANESTHESIA AND ANALGESIA*
Chu, L. F., Young, C. A., Zamora, A. K., Lowe, D., Hoang, D. B., Pearl, R. G., Macario, A.
2011; 112 (2): 430-439
 - **Management of staffing and case scheduling for anesthesia outside the operating room** *Anesthesia Outside of the Operating Room*
Macario, A.
Oxford University Press.2011; 1: 42-48
 - **Processed EEG and Awareness Monitoring** *Manual of Clinical Anesthesiology*
Desai, A., Macario, A.
Lippincott Williams & Wilkins.2011; 1: 96-100
 - **Pharmacoeconomics** *Anesthetic Pharmacology: Basic Principles and Clinical Practice*
Macario, A.
Cambridge University Press.2011; 2: 166-176
 - **Can an Acute Pain Service Be Cost-Effective?** *ANESTHESIA AND ANALGESIA*
Sun, E., Dexter, F., Macario, A.
2010; 111 (4): 841-844
 - **Restoration of disk height through non- surgical spinal decompression is associated with decreased discogenic low back pain: a retrospective cohort study** *BMC MUSCULOSKELETAL DISORDERS*
Apfel, C. C., Cakmakaya, O. S., Martin, W., Richmond, C., Macario, A., George, E., Schaefer, M., Pergolizzi, J. V.
2010; 11
 - **Patient and physician perceptions of treatment of moderate-to-severe chronic pain with oral opioids** *CURRENT MEDICAL RESEARCH AND OPINION*
Duensing, L., Eksterowicz, N., Macario, A., Brown, M., Stern, L., Ogbonnaya, A.
2010; 26 (7): 1579-1585
 - **Learning management systems and lecture capture in the medical academic environment.** *International anesthesiology clinics*
Chu, L. F., Young, C. A., Ngai, L. K., Cun, T., Pearl, R. G., Macario, A.
2010; 48 (3): 27-51
 - **The role of social networking applications in the medical academic environment.** *International anesthesiology clinics*
Chu, L. F., Zamora, A. K., Young, C. A., Kurup, V., Macario, A.
2010; 48 (3): 61-82
 - **The limitations of using operating room utilisation to allocate surgeons more or less surgical block time in the USA** *ANAESTHESIA*
Macario, A.
2010; 65 (6): 548-552
 - **What does one minute of operating room time cost?** *JOURNAL OF CLINICAL ANESTHESIA*
Macario, A.
2010; 22 (4): 233-236

- **Preoperative evaluation clinics** *CURRENT OPINION IN ANESTHESIOLOGY*
Yen, C., Tsai, M., Macario, A.
2010; 23 (2): 167-172
- **Challenges that limit meaningful use of health information technology** *CURRENT OPINION IN ANESTHESIOLOGY*
Kadry, B., Sanderson, I. C., Macario, A.
2010; 23 (2): 184-192
- **Anesthesia 2.0: Internet-based information resources and Web 2.0 applications in anesthesia education** *CURRENT OPINION IN ANESTHESIOLOGY*
Chu, L. F., Young, C., Zamora, A., Kurup, V., Macario, A.
2010; 23 (2): 218-227
- **Prevalence of anaesthesia information management systems in university-affiliated hospitals in Europe** *EUROPEAN JOURNAL OF ANAESTHESIOLOGY*
Balust, J., Halbeis, C. B., Macario, A.
2010; 27 (2): 202-208
- **Cost-effectiveness of external cephalic version for term breech presentation** *BMC PREGNANCY AND CHILDBIRTH*
Tan, J. M., Macario, A., Carvalho, B., Druzin, M. L., El-Sayed, Y. Y.
2010; 10
- **Anesthesia group management and strategies** *Handbook of Healthcare Delivery Systems*
Hass, W., Macario, A., Garner, R.
CRC Press.2010; 1
- **Improving safety in the operating room: a systematic literature review of retained surgical sponges** *CURRENT OPINION IN ANESTHESIOLOGY*
Wan, W., Le, T., Riskin, L., Macario, A.
2009; 22 (2): 207-214
- **Managing quality in an anesthesia department** *CURRENT OPINION IN ANESTHESIOLOGY*
McIntosh, C. A., Macario, A.
2009; 22 (2): 223-231
- **Can anesthesia information management systems improve quality in the surgical suite?** *CURRENT OPINION IN ANESTHESIOLOGY*
Balust, J., Macario, A.
2009; 22 (2): 215-222
- **Should I get a Master of Business Administration? The anesthesiologist with education training: training options and professional opportunities** *CURRENT OPINION IN ANESTHESIOLOGY*
Desai, A. M., Trillo, R. A., Macario, A.
2009; 22 (2): 191-198
- **Truth in Scheduling: Is It Possible to Accurately Predict How Long a Surgical Case Will Last?** *ANESTHESIA AND ANALGESIA*
Macario, A.
2009; 108 (3): 681-685
- **Operative Time and Other Outcomes of the Electrothermal Bipolar Vessel Sealing System (LigaSure (TM)) Versus Other Methods for Surgical Hemostasis: A Meta-Analysis** *SURGICAL INNOVATION*
Macario, A., Dexter, F., Sypal, J., Cosgriff, N., Heniford, B. T.
2008; 15 (4): 284-291
- **Part-time clinical anesthesia practice: a review of the economic, quality, and safety issues.** *Anesthesiology clinics*
McIntosh, C. A., Macario, A.
2008; 26 (4): 707-?
- **How to evaluate whether a new technology in the operating room is cost-effective from society's viewpoint.** *Anesthesiology clinics*
Tan, J. M., Macario, A.
2008; 26 (4): 745-?
- **Anesthesiology clinics. Value-based anesthesia. Preface.** *Anesthesiology clinics*
Macario, A.

2008; 26 (4): xiii-xiv

- **Adoption of anesthesia information management systems by academic departments in the United States** *ANESTHESIA AND ANALGESIA*
Halbeis, C. B., Epstein, R. H., Macario, A., Pearl, R. G., Grunwald, Z.
2008; 107 (4): 1323-1329
- **Vaginal twin delivery: a survey and review of location, anesthesia coverage and interventions** *38th Annual Meeting of the Society-for-Obstetric-Anesthesia-and-Perinatology*
Carvalho, B., Saxena, A., Butwick, A., Macario, A.
CHURCHILL LIVINGSTONE.2008: 212-16
- **Training attendings to be expert teachers: the Stanford Anesthesia Teaching Scholars Program** *JOURNAL OF CLINICAL ANESTHESIA*
Macario, A., Edler, A., Pearl, R.
2008; 20 (3): 241-242
- **The reuse of anesthesia breathing systems: another difference of opinion and practice between the United States and Europe** *JOURNAL OF CLINICAL ANESTHESIA*
Halbeis, C. B., Macario, A., Brock-Ume, J. G.
2008; 20 (2): 81-83
- **Treatment of 94 outpatients with chronic discogenic low back pain with the DRX9000: a retrospective chart review.** *Pain practice*
Macario, A., Richmond, C., Auster, M., Pergolizzi, J. V.
2008; 8 (1): 11-17
- **Complications in Anesthesiology (book review)** *JAMA*
Macario, A.
2008; 299 (21): 2569-2570
- **Management of the Difficult and Failed Airway** *JAMA*
Maxwell, B., Macario, A.
2008; 300 (7): 850-851
- **Tratado de anestesia y reanimacion** *Cost control and quality improvement in anesthesia*
Montejo, L., Macario, A.
Aran Ediciones, S.A., Madrid, Spain.2008; 2
- **Ambulatory surgery center profitability, efficiency and cost containment** *Handbook of Ambulatory Anesthesia*
Archer, T., Mannis, S., Macario, A.
Springer.2008; 2: 396-419
- **Geriatric Anesthesiology** *JAMA*
Macario, A.
2008; 299 (15): 1839-1840
- **Are your operating rooms 'efficient'?** *OR manager*
Macario, A.
2007; 23 (12): 16-18
- **Identification of systematic underestimation (bias) of case durations during case scheduling would not markedly reduce overutilized operating room time** *Annual Meeting of the American-Society-of-Anesthesiologists*
Dexter, F., Macario, A., Ledolter, J.
ELSEVIER SCIENCE INC.2007: 198-203
- **Is external cephalic version cost-effective?** *39th Annual Meeting of the Society-for-Obstetric-Anesthesia-and-Perinatology*
Tan, J. M., Macario, A., Carvalho, B., El-Sayed, Y.
LIPPINCOTT WILLIAMS & WILKINS.2007: B16-B16
- **A cost-analysis of neuraxial analgesia to facilitate external cephalic version** *39th Annual Meeting of the Society-for-Obstetric-Anesthesia-and-Perinatology*
Tan, J. M., Macario, A., El-Sayed, Y., Carvalho, B.
LIPPINCOTT WILLIAMS & WILKINS.2007: B53-B53

- **Complications of Regional Anesthesia Peripheral Nerve Blocks on DVD: Upper Limbs and Lower Limbs (book and media reviews)** *JAMA*
Macario, A.
2007; 298 (21): 2546-2552
- **Hospitalization costs of total knee arthroplasty with a continuous femoral nerve block provided only in the hospital versus on an ambulatory basis: A retrospective, case-control, cost-minimization analysis** *REGIONAL ANESTHESIA AND PAIN MEDICINE*
Ilfeld, B. M., Mariano, E. R., Williams, B. A., Woodard, J. N., Macario, A.
2007; 32 (1): 46-54
- **Economic analysis of perioperative optimization.** *Perioperative Medicine: Managing for Outcome*
Archer, T., Mannis, S., Macario, A.
Saunders.2007; 1: 673-687
- **Scheduling elective pediatric procedures that require anesthesia: The perspective of parents** *ANESTHESIA AND ANALGESIA*
Mariano, E. R., Chu, L. F., Ramamoorthy, C., Macario, A.
2006; 103 (6): 1426-1431
- **Systematic literature review of spinal decompression via motorized traction for chronic discogenic low back pain.** *Pain practice*
Macario, A., Pergolizzi, J. V.
2006; 6 (3): 171-178
- **Staffing and case scheduling for anesthesia in geographically dispersed locations outside of operating rooms.** *Current opinion in anaesthesiology*
Dexter, F., Macario, A., Cowen, D. S.
2006; 19 (4): 453-458
- **Staffing and case scheduling for anesthesia in geographically dispersed locations outside of operating rooms** *CURRENT OPINION IN ANESTHESIOLOGY*
Dexter, F., Macario, A., Cowen, D. S.
2006; 19 (4): 453-458
- **Are your hospital operating rooms "efficient"? A scoring system with eight performance indicators** *ANESTHESIOLOGY*
Macario, A.
2006; 105 (2): 237-240
- **Initial clinical evaluation of a handheld device for detecting retained surgical gauze sponges using radiofrequency identification technology** *ARCHIVES OF SURGERY*
Macario, A., Morris, D., Morris, S.
2006; 141 (7): 659-662
- **Is there value in obtaining a patient's willingness to pay for a particular anesthetic intervention?** *ANESTHESIOLOGY*
Macario, A., Fleisher, L. A.
2006; 104 (5): 906-909
- **Factors affecting supply and demand of anesthesiologists in Western Europe** *CURRENT OPINION IN ANESTHESIOLOGY*
Halbeis, C. B., Macario, A.
2006; 19 (2): 207-212
- **The drive for operating room efficiency will increase quality of patient care** *CURRENT OPINION IN ANESTHESIOLOGY*
Archer, T., Macario, A.
2006; 19 (2): 171-176
- **The drive for operating room efficiency will increase quality of patient care.** *Current opinion in anaesthesiology*
Archer, T., Macario, A.
2006; 19 (2): 171-176
- **A Markov computer simulation model of the economics of neuromuscular blockade in patients with acute respiratory distress syndrome.** *BMC medical informatics and decision making*
Macario, A., Chow, J. L., Dexter, F.
2006; 6: 15-?
- **Factors affecting supply and demand of anesthesiologists in Western Europe.** *Current opinion in anaesthesiology*

-
- Egger Halbeis, C. B., Macario, A.
2006; 19 (2): 207–12
- **Operating Room Management: an update** *Current Reviews in Clinical Anesthesia (CME)*
Macario, A.
Frank Moya Continuing Education Programs.2006: 27–34
 - **Anesthesiology (book review)** *JAMA*
Macario, A.
2006; 295 (9): 1067-1072
 - **Anesthesiologists' practice patterns for treatment of postoperative nausea and vomiting in the ambulatory Post Anesthesia Care Unit.** *BMC anesthesiology*
Macario, A., Claybon, L., Pergolizzi, J. V.
2006; 6: 6-?
 - **Validity and usefulness of a method to monitor surgical services' average bias in scheduled case durations** *CANADIAN JOURNAL OF ANAESTHESIA- JOURNAL CANADIEN D ANESTHESIE*
Dexter, F., Macario, A., Epstein, R. H., Ledolter, J.
2005; 52 (9): 935-939
 - **Patient preferences for anesthesia outcomes associated with Cesarean delivery** *ANESTHESIA AND ANALGESIA*
Carvalho, B., Cohen, S. E., Lipman, S. S., Fuller, A., Mathusamy, A. D., Macario, A.
2005; 101 (4): 1182-1187
 - **Quantifying effect of a hospital's caseload for a surgical specialty on that of another hospital using multi-attribute market segments.** *Health care management science*
Dexter, F., Wachtel, R. E., Sohn, M., Ledolter, J., Dexter, E. U., Macario, A.
2005; 8 (2): 121-131
 - **Meta-analysis of trial comparing postoperative recovery after anesthesia with sevoflurane or desflurane** *13th World Congress of Anesthesiologists*
Macario, A., Dexter, F., Lubarsky, D.
AMER SOC HEALTH-SYSTEM PHARMACISTS.2005: 63–68
 - **Urine drug testing in chronic pain patients taking opioids: a clinical practice update** *Macario A, Pergolizzi J. Urine drug testing in chronic pain patients taking opioids: a clinical practice update. The International Journal of Pain Medicine and Palliative Care (Journal no longer published)*
Macario, A., Pergolizzi, J.
2005; 4 (1): 17-23
 - **The Post Anesthesia Care Unit** *Miller's Anesthesia*
Feeley, T., Macario, A.
Churchill Livingstone .2005; 6
 - **Systematic literature review of economics of IV patient controlled analgesia.** *Pharmacy and Therapeutics (ISSN 1052-1372)*
Macario, A.
2005; 30 (7): 392-399
 - **Improving the quality of anesthesia care** *Current Reviews in Clinical Anesthesia (CME)*
Macario, A.
2005; 25 (25): 323-331
 - **Cost-effectiveness of a trial of labor after previous cesarean delivery depends on the a priori chance of success** *CLINICAL OBSTETRICS AND GYNECOLOGY*
Macario, A., El-Sayed, Y. Y., Druzin, M. L.
2004; 47 (2): 378-385
 - **Patient preferences regarding cesarean section anesthesia outcomes** *36th Annual Meeting of the Society-for-Obstetric-Anesthesia-and-Perinatology*
Carvalho, B., Macario, A., Lipman, S., Muthusamy, A. D., Fuller, A., Brummel, C., Cohen, S. E.
LIPPINCOTT WILLIAMS & WILKINS.2004: B37–B37
 - **When to release allocated operating room time to increase operating room efficiency** *ANESTHESIA AND ANALGESIA*
Dexter, F., Macario, A.

2004; 98 (3): 758-762

- **Profit maximization in an ambulatory surgery center** *Ambulatory Anesthesia and Perioperative Analgesia*
Archer, T., Mannis, S., Macario, A.
McGraw-Hill Professional.2004; 1
- **Pain and nausea management after surgery** *The International Journal of Pain Medicine and Palliative Care (journal no longer published)*
Macario, A., Pergolizzi, J.
2004; 3 (3): 91-100
- **Pharmacoeconomics** *Anesthetic Pharmacology: Physiologic Principles and Clinical Practice*
Macario, A.
Churchill Livingstone.2004: 91-103
- **Economics of one-stage versus two-stage bilateral total knee arthroplasties** *CLINICAL ORTHOPAEDICS AND RELATED RESEARCH*
Macario, A., Schilling, P., Rubio, R., Goodman, S.
2003: 149-156
- **What questions do patients undergoing lower extremity joint replacement surgery have?** *BMC HEALTH SERVICES RESEARCH*
Macario, A., Schilling, P., Rubio, R., Bhalla, A., Goodman, S.
2003; 3
- **Operating room utilization alone is not an accurate metric for the allocation of operating room block time to individual surgeons with low caseloads** *ANESTHESIOLOGY*
Dexter, F., Macario, A., Traub, R. D., Lubarsky, D. A.
2003; 98 (5): 1243-1249
- **Physicians' perceptions of minimum time that should be saved to move a surgical case from one operating room to another: Internet-based survey of the membership of the association of anesthesia clinical directors (AACD)** *JOURNAL OF CLINICAL ANESTHESIA*
Dexter, F., Smith, T. C., Tatman, D. J.
2003; 15 (3): 206-210
- **The pharmacy cost of delivering postoperative analgesia to patients undergoing joint replacement surgery** *JOURNAL OF PAIN*
Macario, A., McCoy, M.
2003; 4 (1): 22-28
- **How to release allocated operating room time to increase efficiency: Predicting which surgical service will have the most underutilized operating room time** *ANESTHESIA AND ANALGESIA*
Dexter, F., Traub, R. D., Macario, A.
2003; 96 (2): 507-512
- **A Sabbatical in Madrid** *travel memoir book*
Alex Macario
2003
- **Technology and computing in the surgical suite: Key features of an OR management information system and opportunities for the future** *ANESTHESIA AND ANALGESIA*
Macario, A., Vasawala, M.
2002; 95 (4): 1120-1121
- **Development of an appropriate list of surgical procedures of a specified maximum anesthetic complexity to be performed at a new ambulatory surgery facility** *ANESTHESIA AND ANALGESIA*
Dexter, F., Macario, A., Penning, D. H., Chung, P.
2002; 95 (1): 78-82
- **Economic evaluation of noncontact normothermic wound therapy for treatment of pressure ulcers.** *Expert review of pharmacoeconomics & outcomes research*
Macario, A.
2002; 2 (3): 211-217
- **Changing allocations of operating room time from a system based on historical utilization to one where the aim is to schedule as many surgical cases as possible** *ANESTHESIA AND ANALGESIA*

- Dexter, F., Macario, A.
2002; 94 (5): 1272-1279
- **Is noncontact normothermic wound therapy cost effective for the treatment of stages 3 and 4 pressure ulcers?** *WOUNDS-A COMPENDIUM OF CLINICAL RESEARCH AND PRACTICE*
Macario, A., Dexter, F.
2002; 14 (3): 93-106
 - **What is quality improvement in the preoperative period?** *International anesthesiology clinics*
Archer, T., Schmiesing, C., Macario, A.
2002; 40 (2): 1-16
 - **What are the most important risk factors for a patient's developing intraoperative hypothermia?** *ANESTHESIA AND ANALGESIA*
Macario, A., Dexter, F.
2002; 94 (1): 215-220
 - **Is non-contact thermal wound therapy cost-effective for the treatment of stage 3 and 4 pressure ulcers?** *Wounds (ISSN 1044-7946)*
Macario, A., Dexter, F.
2002; 14 (3): 1-14
 - **Economic considerations related to providing adequate pain relief for women in labour - Comparison of epidural and intravenous analgesia** *PHARMACOECONOMICS*
Huang, C., Macario, A.
2002; 20 (5): 305-318
 - **Ketorolac in the era of cyclo-oxygenase-2 selective nonsteroidal anti-inflammatory drugs: A systematic review of efficacy, side effects, and regulatory issues** *PAIN MEDICINE*
Macario, A., Lipman, A. G.
2001; 2 (4): 336-351
 - **Hospital profitability per hour of operating room time can vary among surgeons** *94th Annual Meeting of the Southern-Medical-Association*
Macario, A., Dexter, F., Traub, R. D.
LIPPINCOTT WILLIAMS & WILKINS.2001: 669-75
 - **Variation in practice patterns of anesthesiologists in California for prophylaxis of postoperative nausea and vomiting** *JOURNAL OF CLINICAL ANESTHESIA*
Macario, A., Chung, A., Weinger, M. B.
2001; 13 (5): 353-360
 - **Cost-effectiveness of a trial of labor after previous cesarean** *OBSTETRICS AND GYNECOLOGY*
Chung, A., Macario, A., El-Sayed, Y. Y., Riley, E. T., Duncan, B., Druzin, M. L.
2001; 97 (6): 932-941
 - **The surgical suite meets the new health economy** *JOURNAL OF THE AMERICAN COLLEGE OF SURGEONS*
Canales, M. G., Macario, A., Krummel, T.
2001; 192 (6): 768-776
 - **The impact on revenue of increasing patient volume at surgical suites with relatively high operating room utilization** *ANESTHESIA AND ANALGESIA*
Dexter, F., Macario, A., Lubarsky, D. A.
2001; 92 (5): 1215-1221
 - **Optimal number of beds and occupancy to minimize staffing costs in an obstetrical unit?** *CANADIAN JOURNAL OF ANAESTHESIA-JOURNAL CANADIEN D ANESTHESIE*
Dexter, F., Macario, A.
2001; 48 (3): 295-301
 - **Can peri-operative quality be maintained in the drive for operating room efficiency? An American perspective.** *Best Practice and Research Clinical Anaesthesiology*
Canales, M., Macario, A.
2001; 15 (4): 607-619

- **Improving quality of anesthesia care: opportunities for the new decade** *CANADIAN JOURNAL OF ANAESTHESIA-JOURNAL CANADIEN D ANESTHESIE*
Macario, A., Vasanawala, A.
2001; 48 (1): 6-11
- **Regional anesthesia and pediatric cardiac surgery - In response** *ANESTHESIA AND ANALGESIA*
Hammer, G. B., Ngo, K., Macario, A.
2000; 91 (6): 1562-1562
- **Enterprise-wide patient scheduling information systems to coordinate surgical clinic and operating room scheduling can impair operating room efficiency** *ANESTHESIA AND ANALGESIA*
Dexter, F., Macario, A., Traub, R. D.
2000; 91 (3): 617-626
- **Is a trial of labor in a patient who has had a previous cesarean delivery cost-effective?**
Chung, A. J., Macario, A., El-Sayed, Y. Y., Riley, E. T., Druzin, M. L.
LIPPINCOTT WILLIAMS & WILKINS.2000: U212-U212
- **Quantitative description of the workload associated with airway management procedures** *Annual Meeting of the American-Society-of-Anesthesiologists*
Weinger, M. B., Vredenburg, A. G., Schumann, C. M., Macario, A., Williams, K. J., Kalsher, M. J., Smith, B., Truong, P. C., Kim, A.
ELSEVIER SCIENCE INC.2000: 273-82
- **What is the relative frequency of uncommon ambulatory surgery procedures performed in the United States with an anesthesia provider?** *ANESTHESIA AND ANALGESIA*
Dexter, F., Macario, A.
2000; 90 (6): 1343-1347
- **A retrospective examination of regional plus general anesthesia in children undergoing open heart surgery** *ANESTHESIA AND ANALGESIA*
Hammer, G. B., Ngo, K., Macario, A.
2000; 90 (5): 1020-1024
- **Effect of compensation and patient scheduling on OR labor costs.** *AORN journal*
Macario, A., Dexter, F.
2000; 71 (4): 860-?
- **Is a trial of labor in a patient who has had a previous cesarean delivery cost-effective?**
Chung, A., Macario, A., El-Sayed, Y., Riley, E. T., Duncan, B., Sheinberg, D.
LIPPINCOTT WILLIAMS & WILKINS.2000: U11-U11
- **Scheduling surgical cases into overflow block time - Computer simulation of the effects of scheduling strategies on operating room labor costs** *Computers in Anesthesia Conference*
Dexter, F., Macario, A., O'Neill, L.
LIPPINCOTT WILLIAMS & WILKINS.2000: 980-88
- **Analgesia for labor pain: A cost model** *Annual Meeting of the American-Society-of-Anesthesiologists*
Macario, A., Scibetta, W. C., Navarro, J., Riley, E.
LIPPINCOTT WILLIAMS & WILKINS.2000: 841-50
- **Statistical method using operating room information system data to determine anesthetist weekend call requirements.** *AANA journal*
Dexter, F., Macario, A., Traub, R. D.
2000; 68 (1): 21-26
- **Calculating the cost of anesthesia care** *Current Anesthesiology Reports (ISSN: 1523-3855)*
Chung, A., Macario, A.
2000; 2 (5): 409-417
- **Common problems in the postanesthetic care unit** *Contemporary Surgery (ISSN: 0045-8341)*
Vasanawala, M., Macario, A., Canales, M.
2000; 56 (11): 691-700
- **Estimating the duration of a case when the surgeon has not recently scheduled the procedure at the surgical suite** *ANESTHESIA AND ANALGESIA*

- Macario, A., Dexter, F.
1999; 89 (5): 1241-1245
- **Forecasting surgical groups' total hours of elective cases for allocation of block time - Application of time series analysis to operating room management** *ANESTHESIOLOGY*
Dexter, F., Macario, A., Qian, F., Traub, R. D.
1999; 91 (5): 1501-1508
 - **Relying solely on historical surgical times to estimate accurately future surgical times is unlikely to reduce the average length of time cases finish late** *JOURNAL OF CLINICAL ANESTHESIA*
Zhou, J. S., Dexter, F., Macario, A., Lubarsky, D. A.
1999; 11 (7): 601-605
 - **Which algorithm for scheduling add-on elective cases maximizes operating room utilization? Use of bin packing algorithms and fuzzy constraints in operating room management** *ANESTHESIOLOGY*
Dexter, F., Macario, A., Traub, R. D.
1999; 91 (5): 1491-1500
 - **What can the postanesthesia care unit manager do to decrease costs in the postanesthesia care unit?** *Journal of perianesthesia nursing*
Macario, A., Glenn, D., Dexter, F.
1999; 14 (5): 284-293
 - **A strategy for deciding operating room assignments for second-shift anesthetists** *ANESTHESIA AND ANALGESIA*
Dexter, F., Macario, A., O'Neill, L.
1999; 89 (4): 920-924
 - **Which clinical anesthesia outcomes are important to avoid? the perspective of patients** *ANESTHESIA AND ANALGESIA*
Macario, A., Weinger, M., Carney, S., Kim, A.
1999; 89 (3): 652-658
 - **Spinal vs. epidural anesthesia and analgesia in children undergoing open heart surgery**
Hammer, G. B., Ngo, K., Macario, A., Boltz, M. G., Hill, L.
LIPPINCOTT WILLIAMS & WILKINS.1999: U497-U497
 - **An operating room scheduling strategy to maximize the use of operating room block time: Computer simulation of patient scheduling and survey of patients' preferences for surgical waiting time** *1998 Annual Meeting of the Association-of-Anesthesia-Clinical-Directors*
Dexter, F., Macario, A., Traub, R. D., Hopwood, M., Lubarsky, D. A.
LIPPINCOTT WILLIAMS & WILKINS.1999: 7-20
 - **Statistical method to evaluate management strategies to decrease variability in operating room utilization: Application of linear statistical modeling and Monte Carlo simulation to operating room management** *ANESTHESIOLOGY*
Dexter, F., Macario, A., Lubarsky, D. A., Burns, D. D.
1999; 91 (1): 262-274
 - **Which clinical anesthesia outcomes are both common and important to avoid? The perspective of a panel of expert anesthesiologists** *ANESTHESIA AND ANALGESIA*
Macario, A., Weinger, M., Truong, P., Lee, M.
1999; 88 (5): 1085-1091
 - **Optimal sequencing of urgent surgical cases** *JOURNAL OF CLINICAL MONITORING AND COMPUTING*
Dexter, F., Macario, A., Traub, R. D.
1999; 15 (3-4): 153-162
 - **Another use of a bronchoscopic swivel adapter** *ANESTHESIA AND ANALGESIA*
Torralva, P. R., Macario, A., Brock-Utne, J. G.
1999; 88 (5): 1187-1188
 - **Computer simulation to determine how rapid anesthetic recovery protocols to decrease the time for emergence or increase the phase I postanesthesia care unit bypass rate affect staffing of an ambulatory surgery center** *ANESTHESIA AND ANALGESIA*
Dexter, F., Macario, A., Manberg, P. J., Lubarsky, D. A.
1999; 88 (5): 1053-1063

- **Selecting double-lumen tubes for small patients** *ANESTHESIA AND ANALGESIA*
Brodsky, J. B., Fitzmaurice, B. G., Macario, A.
1999; 88 (2): 466-466
- **Decrease in case duration required to complete an additional case during regularly scheduled hours in an operating room suite: A computer simulation study** *ANESTHESIA AND ANALGESIA*
Dexter, F., Macario, A.
1999; 88 (1): 72-76
- **Management of the operating room. A new practice opportunity for anesthesiologists** *Anesthesiology Clinics of North America*
Glenn, D., Macario, A.
1999; 17 (2): 365-394
- **How do hospitals account for costs in the operating room?** *Current Reviews in Clinical Anesthesia (CME)*
Macario, A.
Frank Moya Continuing Education Programs.1999: 193-204
- **Delivering value to the customers of anesthesia service** *Current Reviews in Clinical Anesthesia (CME)*
Macario, A.
Frank Moya Continuing Education Programs.1999: 253-264
- **The economics of delivering surgical care in the OR suite** *Progress in Anesthesiology (Dannemiller Memorial Educational Foundation) ISSN: 0891-5784*
Macario, A.
1999; 8 (17): 315-328
- **Do clinical pathways improve efficiency?** *Seminars in Anesthesia, Perioperative Medicine and Pain (incorporated into Journal of Critical Care)*
Glenn, D., Macario, A.
1999; 18 (4): 281-288
- **Defining quality in medicine to determine how to improve the value of anesthesia care.** *Progress in Anesthesiology*
Macario, A.
Dannemiller Memorial Educational Foundation.1999: 375-388
- **Macario A. Defining quality in medicine to determine how to improve the value of anesthesia care.** *Progress in Anesthesiology issn: 0891-5784*
Macario, A.
1999; VIII (21): 375-388
- **Obstetric postanesthesia care unit stays - Reevaluation of discharge criteria after regional anesthesia** *Annual Meeting of the American-Society-of-Anesthesiologists*
Cohen, S. E., Hamilton, C. L., Riley, E. T., Walker, D. S., Macario, A., Halpern, J. W.
LIPPINCOTT WILLIAMS & WILKINS.1998: 1559-65
- **Computer simulation of changes in nursing productivity from early tracheal extubation of coronary artery bypass graft patients** *JOURNAL OF CLINICAL ANESTHESIA*
Dexter, F., Macario, A., Dexter, E. U.
1998; 10 (7): 593-598
- **Hospital profitability for a surgeon's common procedures predicts the surgeon's overall profitability for the hospital** *JOURNAL OF CLINICAL ANESTHESIA*
Dexter, F., Macario, A., Cerone, S. M.
1998; 10 (6): 457-463
- **Analgesia for labor pain: An economic model**
Scibetta, W., Navarro, J., Macario, A., Washington, D., Rieder, A., Holland, M., Cohen, S. E., Vitez, T.
LIPPINCOTT WILLIAMS & WILKINS.1998: U866-U866
- **Postoperative epidural injection of saline can shorten postanesthesia care unit time for knee arthroscopy patients** *Feminist Theory and Music 4 Conference*
Brock-Utne, J. G., Macario, A., Dillingham, M. F., Fanton, G. S.
W B SAUNDERS CO-ELSEVIER INC.1998: 247-51

- **The effect of a perioperative clinical pathway for knee replacement surgery on hospital costs** *ANESTHESIA AND ANALGESIA*
Macario, A., Horne, M., Goodman, S., Vitez, T., Dexter, F., Heinen, R., Brown, B.
1998; 86 (5): 978-984
- **The impact of managed care on anesthesia residency training and clinical practice.** *Current opinion in anaesthesiology*
Scibetta, W. C., Macario, A.
1998; 11 (2): 221-224
- **Setting performance standards for an anesthesia department** *JOURNAL OF CLINICAL ANESTHESIA*
Vitez, T. S., Macario, A.
1998; 10 (2): 166-175
- **Evaluating operating room anesthesia staffing** *American Journal of Anesthesiology ISSN: 1078-4500*
Navarro, J., Macario, A.
1998; 15 (3): 105-106
- **Bilateral vocal cord paralysis after radical cystectomy in a patient with a history of bulbar polio** *ANESTHESIA AND ANALGESIA*
Macario, A., Mackey, S., Terris, D.
1997; 85 (5): 1171-1172
- **Does early extubation ("fast-tracking") of coronary artery bypass graft surgery patients truly decrease perioperative costs?: Appropriate analysis of direct variable costs** *ANESTHESIOLOGY*
Dexter, F., Macario, A.
1997; 87 (1): 181-181
- **Economics of anesthesia care - A call to arms!** *ANESTHESIOLOGY*
Fisher, D. M., Macario, A.
1997; 86 (5): 1018-1019
- **Hospital costs and severity of illness in three types of elective surgery** *ANESTHESIOLOGY*
Macario, A., Vitez, T. S., Dunn, B., McDonald, T., Brown, B.
1997; 86 (1): 92-100
- **Computers: a practical guide for anesthesiologists** *Advances in Anesthesia*
Garman, J., Macario, A.
1997; 14: 29-53
- **Applications of information systems to operating room scheduling** *ANESTHESIOLOGY*
Dexter, F., Macario, A.
1996; 85 (6): 1232-1234
- **Fuzzy logic: Theory and medical applications** *JOURNAL OF CARDIOTHORACIC AND VASCULAR ANESTHESIA*
Vitez, T. S., Wada, R., Macario, A.
1996; 10 (6): 800-808
- **Severity of illness does not predict hospital costs for three types of elective surgery**
Macario, A., Vitez, T., Dunn, B., McDonald, T., Brown, B.
LIPPINCOTT WILLIAMS & WILKINS.1996: A981-A981
- **Improved outcome with chronic subcutaneous infusion of ondansetron for intractable nausea and vomiting** *ANESTHESIA AND ANALGESIA*
Macario, A., RONQUILLO, R. B., Brose, W. G., Gaeta, R. R.
1996; 83 (1): 194-195
- **Tracheal diameter predicts double-lumen tube size: A method for selecting left double-lumen tubes** *ANESTHESIA AND ANALGESIA*
Brodsky, J. B., Macario, A., Mark, J. B.
1996; 82 (4): 861-864
- **WHERE ARE THE COSTS IN PERIOPERATIVE CARE - ANALYSIS OF HOSPITAL COSTS AND CHARGES FOR INPATIENT SURGICAL CARE** *ANESTHESIOLOGY*
Macario, A., Vitez, T. S., Dunn, B., McDonald, T.

- 1995; 83 (6): 1138-1144
- **SPINAL VERSUS EPIDURAL-ANESTHESIA FOR CESAREAN-SECTION - IN RESPONSE** *ANESTHESIA AND ANALGESIA*
Riley, E. T., Cohen, S. E., Macario, A., Ratner, E. F.
1995; 81 (6): 1319-1319
 - **Modified BronchoCath double-lumen tube** *JOURNAL OF CARDIOTHORACIC AND VASCULAR ANESTHESIA*
Brodsky, J. B., Macario, A.
1995; 9 (6): 784-785
 - **Defining value in health care: Outcomes** *INTERNATIONAL ANESTHESIOLOGY CLINICS*
Macario, A.
1995; 33 (4): 15-31
 - **BLIND PLACEMENT OF PLASTIC LEFT DOUBLE-LUMEN TUBES** *ANAESTHESIA AND INTENSIVE CARE*
Brodsky, J. B., Macario, A., Cannon, W. B., Mark, J. B.
1995; 23 (5): 583-586
 - **PAIN OUTCOMES AFTER THORACOTOMY - LUMBAR EPIDURAL HYDROMORPHONE VERSUS INTRAPLEURAL BUPIVACAINE** *JOURNAL OF CARDIOTHORACIC AND VASCULAR ANESTHESIA*
Gaeta, R. R., Macario, A., Brodsky, J. B., BROCKUTNE, J. G., MARK, B. D.
1995; 9 (5): 534-537
 - **THE DEMOGRAPHICS OF INPATIENT PEDIATRIC ANESTHESIA - IMPLICATIONS FOR CREDENTIALING POLICY** *JOURNAL OF CLINICAL ANESTHESIA*
Macario, A., Hackel, A., Gregory, G. A., FORSETH, D.
1995; 7 (6): 507-511
 - **ANALYSIS OF HOSPITAL COSTS AND CHARGES FOR INPATIENT PERIOPERATIVE CARE WHAT DOES ANESTHESIA REALLY COST**
Macario, A., Vitez, T., Dunn, B., McDonald, T.
LIPPINCOTT WILLIAMS & WILKINS.1995: A1270-A1270
 - **A COST-ANALYSIS OF THE LARYNGEAL MASK AIRWAY FOR ELECTIVE SURGERY IN ADULT OUTPATIENTS** *ANESTHESIOLOGY*
Macario, A., Chang, P. C., STEMPEL, D. B., BROCKUTNE, J. G.
1995; 83 (2): 250-257
 - **SPINAL VERSUS EPIDURAL-ANESTHESIA FOR CESAREAN-SECTION - A COMPARISON OF TIME EFFICIENCY, COSTS, CHARGES, AND COMPLICATIONS** *ANESTHESIA AND ANALGESIA*
Riley, E. T., Cohen, S. E., Macario, A., Desai, J. B., Ratner, E. F.
1995; 80 (4): 709-712
 - **A HEALTH-POLICY PERSPECTIVE ON COSTS OF SHORT-TERM ANESTHESIA SERVICES** *JOURNAL OF CLINICAL ANESTHESIA*
Macario, A.
1995; 7 (2): 175-175
 - **Comparison of estimated variable costs is a surrogate for actual cost experience (correspondence reply)** *Anesthesiology*
Macario, A., Chang, P., Stempel, D., Brock-Utne, J.
1995: 6
 - **ANESTHETISTS OVERESTIMATE BLOOD-LOSS** *CANADIAN JOURNAL OF ANAESTHESIA-JOURNAL CANADIEN D ANESTHESIE*
Macario, A., BROCKUTNE, J.
1994; 41 (10): 1017-1018
 - **ELIMINATION OF 12-FR AND 24-FR ESOPHAGEAL STETHOSCOPES FROM ANESTHETIC PRACTICE (AN ATTEMPT AT COST-CONTAINMENT)** *ANESTHESIA AND ANALGESIA*
Macario, A., BROCKUTNE, J. G.
1994; 79 (2): 393-393
 - **COSTS OF INHALED ANESTHETICS .3.** *ANESTHESIOLOGY*
Macario, A.
1994; 80 (6): 1405-1405

- **REASSESSMENT OF PREOPERATIVE LABORATORY TESTING HAS CHANGED THE TEST-ORDERING PATTERNS OF PHYSICIANS** *SURGERY GYNECOLOGY & OBSTETRICS*

Macario, A., Roizen, M. F., Thisted, R. A., Kim, S., Orkin, F. K., Phelps, C.
1992; 175 (6): 539-547

PRESENTATIONS

- Efficiency in the Surgical Suite - Institut Catala de Salud, Barcelona Spain
- Quality in the Perioperative Period - Hospital Clínico Universitario San Carlos, Madrid, Spain
- Education Research Abstract Moderator - Association of University Anesthesiologists
- Simulation: What does it really cost? - 6th Annual International Meeting on Medical Simulation