Bio

BIO
Dr. David A. Spain is the David L. Gregg, MD Professor and Chief of Acute Care Surgery. His clinical areas of specialty are emergency and elective general surgery, trauma and critical care. His research focus is assessment of clinical care, systems of care and introduction of new technology. He is the current Recorder and Program Chair of the American Association for the Surgery of Trauma and a Governor of the American College of Surgeons. He is the editor of the new textbook Scientific American's Critical Care of the Surgical Patient.

CLINICAL FOCUS
• Critical Care Medicine
• Trauma Surgery
• Splenectomy
• Hernia, Abdominal
• Cholecystectomy, Laparoscopic
• Surgical Critical Care

ACADEMIC APPOINTMENTS
• Professor - Med Center Line, Surgery - General Surgery

ADMINISTRATIVE APPOINTMENTS
• Chief of Trauma and Critical Care Surgery, Stanford University, (2001- present)

HONORS AND AWARDS
• Teaching Award, Stanford/Kaiser Emergency Medicine Residency (2003-04 and 2007-08)
• Collins Teaching Award, General Surgery Residency Progran (2004-2005)
• General Surgery Chief Residents’ Award, Stanford (2009-2010)
PROFESSIONAL EDUCATION

- Board Certification: General Surgery, American Board of Surgery (1993)
- Board Certification: Surgical Critical Care, American Board of Surgery (1996)
- Fellowship: University of Louisville Hospital (1994) KY
- Residency: Robert Wood Johnson University Hospital (1992) NJ
- Medical Education: Wayne State University (1986) MI
- MD, Wayne State University, Medicine (1986)
- BS/Honors, Michigan State University, Biochemistry (1982)

Research & Scholarship

CURRENT RESEARCH AND SCHOLARLY INTERESTS

Our main areas of interest are clinical research in shock, sepsis, multiple organ failure and ICU pneumonia, as well as organizational characteristic of well functioning trauma centers and systems. We are also developing a program in Health Services Research focused on access to specialized, high acuity care

CLINICAL TRIALS

- Sigh Ventilation to Increase Ventilator-Free Days in Victims of Trauma at Risk for Acute Respiratory Distress Syndrome, Not Recruiting

Teaching

GRADUATE AND FELLOWSHIP PROGRAM AFFILIATIONS

- Surgical Critical Care Medicine (Fellowship Program)

Publications

PUBLICATIONS

- The trauma ecosystem: The impact and economics of new trauma centers on a mature statewide trauma system. *Journal of Trauma and Acute Care Surgery*
  2017; 82 (6): 1014-1022

  Spitzer, S. A., Staudenmayer, K. L., Tennakoon, L., Spain, D. A., Weiser, T. G.
  2017; 107 (5): 770-774

- Population-based estimate of trauma-related deaths for law enforcement personnel: Risks for death are higher and increasing over time. *Journal of Trauma and Acute Care Surgery*
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- The American College of Surgeons (ACS) Needs-Based Assessment of Trauma Systems (NBATS): Estimates for the State of California. *Journal of Trauma and Acute Care Surgery*
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- International rotations: A valuable source to supplement operative experience for acute care surgery, trauma and surgical critical care fellows. *Journal of Trauma and Acute Care Surgery*
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- Trends in open vascular surgery for trauma: implications for the future of acute care surgery. *Journal of Surgical Research*
  Forrester, J. D., Weiser, T. G., Maggio, P., Browder, T., Tennakoon, L., Spain, D., Staudenmayer, K.
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Chu, C. H., Tennakoon, L., Maggio, P. M., Weiser, T. G., Spain, D. A., Staudenmayer, K. L.
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The Triage of Injured Patients: Mechanism of Injury, Regardless of Injury Severity, Determines Hospital Destination *AMERICAN SURGEON*
Staudenmayer, K., Wang, N. E., Weiser, T. G., Maggio, P., Mackersie, R. C., Spain, D., Hsia, R. Y.
2016; 82 (4): 356-361

Trauma center care is associated with reduced readmissions after injury. *journal of trauma and acute care surgery*
Staudenmayer, K., Weiser, T. G., Maggio, P. M., Spain, D. A., Hsia, R. Y.
2016; 80 (3): 412-418

Uninsured status may be more predictive of outcomes among the severely injured than minority race *INJURY-INTERNATIONAL JOURNAL OF THE CARE OF THE INJURED*
Gerry, J. M., Weiser, T. G., Spain, D. A., Staudenmayer, K. L.
2016; 47 (1): 197-202

Small bowel obstruction: A practical step-by-step evidence-based approach to evaluation, decision making, and management. *journal of trauma and acute care surgery*
Azagury, D., Liu, R. C., Morgan, A., Spain, D. A.
2015; 79 (4): 661-668

Adding insult to injury: discontinuous insurance following spine trauma. *journal of bone and joint surgery. American volume*
2015; 97 (2): 141-146

Adding Insult to Injury: Discontinuous Insurance Following Spine Trauma *JOURNAL OF BONE AND JOINT SURGERY-AMERICAN VOLUME*
2015; 97A (2): 141-146

Prediction of neurosurgical intervention after mild traumatic brain injury using the national trauma data bank. *World journal of emergency surgery*
Sweeney, T. E., Salles, A., Harris, O. A., Spain, D. A., Staudenmayer, K. L.
2015; 10: 23-?

Prediction of neurosurgical intervention after mild traumatic brain injury using the national trauma data bank. *World journal of emergency surgery*
Sweeney, T. E., Salles, A., Harris, O. A., Spain, D. A., Staudenmayer, K. L.
2015; 10: 23-?

Ground-level Falls Are a Marker of Poor Outcome in the Injured Elderly *AMERICAN SURGEON*
Gerry, J. M., Spain, D. A., Staudenmayer, K. L.
2014; 80 (11): 1171-1173

Environmental Sampling for Clostridium difficile on Alcohol-Based Hand Rub Dispensers in an Academic Medical Center *SURGICAL INFECTIONS*
Forrester, J. D., Banaei, N., Buchner, P., Spain, D. A., Staudenmayer, K. L.
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Variations in Pediatric Trauma Transfer Patterns in Northern California Pediatric Trauma Centers (2001-2009) *ACADEMIC EMERGENCY MEDICINE*
2014; 21 (9): 1023-1030

Variations in pediatric trauma transfer patterns in Northern California pediatric trauma centers (2001-2009). *Academic emergency medicine*
2014; 21 (9): 1023-1030

Clostridium ramosum Bacteremia: Case Report and Literature Review *SURGICAL INFECTIONS*
Forrester, J. D., Spain, D. A.
2014; 15 (3): 343-346
• Factors Associated With the Disposition of Severely Injured Patients Initially Seen at Non-Trauma Center Emergency Departments Disparities by Insurance Status. *JAMA Surgery*
2014; 149 (5): 422-430

• Factors associated with the disposition of severely injured patients initially seen at non–trauma center emergency departments: disparities by insurance status. *JAMA surgery*
2014; 149 (5): 422-430

• Variability in California triage from 2005 to 2009: A population-based longitudinal study of severely injured patients. *Journal of Trauma and Acute Care Surgery*
Staadenmayer, K., Lin, F., Mackersie, R., Spain, D., Hsia, R.
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• The epidemiology of trauma-related mortality in the United States from 2002 to 2010. *Journal of Trauma and Acute Care Surgery*
Sise, R. G., Calvo, R. Y., Spain, D. A., Weiser, T. G., Staadenmayer, K. L.
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• Cost-effectiveness of helicopter versus ground emergency medical services for trauma scene transport in the United States. *Annals of Emergency Medicine*
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• Cost-effectiveness of helicopter versus ground emergency medical services for trauma scene transport in the United States. *Annals of Emergency Medicine*
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• Cost-effectiveness of preoperative imaging for appendicitis after indeterminate ultrasonography in the second or third trimester of pregnancy. *Obstetrics and Gynecology*
2013; 122 (4): 821-829

• Triage of elderly trauma patients: a population-based perspective. *Journal of the American College of Surgeons*
Staadenmayer, K. L., Hsia, R. Y., Mann, N. C., Spain, D. A., Newgard, C. D.
2013; 217 (4): 569-576

• Logistics of transfusion support for patients with massive hemorrhage. *Current Opinion in Anesthesiology*
Goodnough, L. T., Spain, D. A., Maggio, P.
2013; 26 (2): 208-214

• Predictors of emergency department death for patients presenting with ruptured abdominal aortic aneurysms. *Journal of Vascular Surgery*
2012; 56 (3): 651-655

• Payer status is associated with the use of prophylactic inferior vena cava filter in high-risk trauma patients. *Surgery*
2012; 152 (2): 232-237

• Outcomes of Complex Abdominal Herniorrhaphy Experience With 106 Cases. *Annals of Plastic Surgery*
Satterwhite, T. S., Miri, S., Chung, C., Spain, D., Lorenz, H. P., Lee, G. K.
2012; 68 (4): 382-388

• Abdominal wall reconstruction with dual layer cross-linked porcine dermal xenograft: The “Pork Sandwich” herniorrhaphy. *Journal of Plastic, Reconstructive, and Aesthetic Surgery*
Satterwhite, T. S., Miri, S., Chung, C., Spain, D. A., Lorenz, H. P., Lee, G. K.
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• The forgotten trauma patient: Outcomes for injured patients evaluated by emergency medical services but not transported to the hospital. *Journal of Trauma and Acute Care Surgery*
Staadenmayer, K., Hsia, R., Wang, E., Sporer, K., Ghilarducci, D., Spain, D., Mackersie, R., Sherck, J., Kline, R., Newgard, C.
• Statins for Everyone Are We There Yet? ARCHIVES OF SURGERY
Spain, D. A.
2012; 147 (2): 189-189

• Under-Utilization of Transfer for Ruptured Abdominal Aortic Aneurysm (rAAA) in the Western United States
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• Characteristics of Pediatric Trauma Transfers to a Level I Trauma Center: Implications for Developing a Regionalized Pediatric Trauma System in California ACADEMIC EMERGENCY MEDICINE
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• Early outcomes of deliberate nonoperative management for blunt thoracic aortic injury in trauma JOURNAL OF THORACIC AND CARDIOVASCULAR SURGERY
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• Training and Certification in Surgical Critical Care: A Position Paper by the Surgical Critical Care Program Directors Society JOURNAL OF TRAUMA-INJURY INFECTION AND CRITICAL CARE
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• Demographic and Financial Analysis of EMTALA Hand Patient Transfers. Hand (New York, N.Y.)
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• Emergency Innovation: Implications for the Trauma Surgeon JOURNAL OF TRAUMA-INJURY INFECTION AND CRITICAL CARE
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• Massive Transfusion Protocols: The Role of Aggressive Resuscitation Versus Product Ratio in Mortality Reduction JOURNAL OF THE AMERICAN COLLEGE OF SURGEONS
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• The impact of hypopituitarism on function and performance in subjects with recent history of traumatic brain injury and aneurysmal subarachnoid haemorrhage. Brain injury
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• An Evaluation of Multidetector Computed Tomography in Detecting Pancreatic Injury: Results of a Multicenter AAST Study JOURNAL OF TRAUMA-INJURY INFECTION AND CRITICAL CARE
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• The impact of hypopituitarism on function and performance in subjects with recent history of traumatic brain injury and aneurysmal subarachnoid haemorrhage BRAIN INJURY
2009; 23 (7-8): 639-648
Validation of a Prehospital Trauma Triage Tool: A 10-Year Perspective JOURNAL OF TRAUMA-INJURY INFECTION AND CRITICAL CARE
2008; 65 (6): 1253-1257

Insulin increases the release of proinflammatory mediators 63rd Annual Meeting of the American-Association-for-the-Surgery-of-Trauma
Brundage, S. I., Kirilcuk, N. N., Lam, J. C., Spain, D. A., Zautke, N. A.
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CT angiography effectively evaluates extremity vascular trauma AMERICAN SURGEON
Peng, P. D., Spain, D. A., Tataria, M., Hellinger, J. C., Rubin, G. D., Brundage, S. I.
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County hospital surgical practice: a model for acute care surgery 59th Annual Meeting of the Southwestern-Surgical-Congress
EXCERPTA MEDICA INC-ELSEVIER SCIENCE INC.2007: 758–64

Pediatric blunt abdominal injury: Age is irrelevant and delayed operation is not detrimental 64th Annual Meeting of the American-Association-for-the-Surgery-of-Trauma
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Venous air embolism and pressure infusion devices JOURNAL OF TRAUMA-INJURY INFECTION AND CRITICAL CARE
Mendenhall, M. L., Spain, D. A.
2007; 63 (1): 246-246

Recruitment strategies for a fall prevention program: If we build it, will they really come? 36th Annual Meeting of the Western-Trauma-Association
Shandro, J. R., Spain, D. A., Dicker, R. A.
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Requests for 692 transfers to an academic Level I trauma center: Implications of the Emergency Medical Treatment and Active Labor Act 65th Annual Meeting of the American-Association-for-the-Surgery-of-Trauma
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Are temporary inferior vena cava filters really temporary? 57th Annual Meeting of the Southwestern-Surgical-Congress
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• Interleukin-6 infusion blunts proinflammatory cytokine production without causing systematic toxicity in a swine model of uncontrolled hemorrhagic shock JOURNAL OF TRAUMA-INJURY INFECITION AND CRITICAL CARE
  2004; 57 (5): 970-977

• Perioperative risk assessment in elderly and high-risk patients International Symposium on World Overview of Important Nutrition Problems and How They are Being Addressed
  ELSEVIER SCIENCE INC.2004: 133–46

• Impairment of endothelium-dependent dilation response after resuscitation from hemorrhagic shock involved postreceptor mechanisms 24th Annual Meeting of the Shock-Society
  Zakaria, E. R., Garrison, R. N., Spain, D. A., Harris, P. D.
  LIPPINCOTT WILLIAMS & WILKINS.2004: 175–81

• The continuing challenge of intra-abdominal infection. American journal of surgery
  Cheadle, W. G., Spain, D. A.
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• The continuing challenge of intra-abdominal infection 27th Annual Surgical Symposium of the Association-of-VA-Surgeons
  Cheadle, W. G., Spain, D. A.
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• Society of University Surgeons position statement on the volume-outcome relationship for surgical procedures SURGERY
  Berger, D. H., Ko, C. Y., Spain, D. A.
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  Zakaria, E. R., Garrison, R. N., Spain, D. A., Matheson, P. J., Harris, P. D., Richardson, J. D.
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• Immune-enhancing enteral diet increases blood flow and proinflammatory cytokines in the rat ileum 26th Annual Meeting of the Association-of-VA-Surgeons
  Matheson, P. J., Hurt, R. T., Mittel, O. F., Wilson, M. A., Spain, D. A., Garrison, R. N.
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Examination of the role of abdominal computed tomography in the evaluation of victims of trauma with increased aspartate aminotransferase in the era of focused abdominal sonography for trauma 59th Annual Meeting of the Central-Surgical-Association
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• Impact of recent trends of noninvasive trauma evaluation and nonoperative management in surgical resident education 60th Annual Meeting of the American-Association-for-the-Surgery-of-Trauma
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Zhao, H. L., Spain, D. A., Matheson, P. J., Vaughn, C., Harris, P. D., Garrison, R. N.
MOSBY-ELSEVIER.2000: 513–18

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Krysztopik, R. J., Matheson, P. J., Spain, D. A., Garrison, R. N., Wilson, M. A.
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• Decreased alpha-adrenergic response in the intestinal microcirculation after “two-hit” hemorrhage resuscitation and bacteremia Annual Meeting of the Association-for-Academic-Surgery
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