

Curriculum Vitae

MICHAEL PINE M.D., M.B.A.

Place of Birth:

New York, NY

Education:

1962 - B.A. Brandeis University, Waltham, MA (magna cum laude)

1966 - M.D. Harvard Medical School, Boston, MA

1986 - M.B.A. University of Cincinnati, Cincinnati, OH

Postdoctoral Training:

1966/67- Intern, Montefiore Hospital, New York, NY

1967/68- Resident in Medicine, Montefiore Hospital, New York, NY

1970/72- Research Fellow in Cardiology, Columbia Presbyterian Medical Center, New York, NY

1972/73- Resident in Medicine, Columbia Presbyterian Medical Center, New York, NY

1973/75- Clinical Fellow in Cardiology, University of Colorado Medical Center, Denver, CO

Military Service:

1968/70- Surgeon (Lieutenant Commander) U.S. Public Health Service,

Professional Positions:

1968/70- Medical Economist, Health Institutions Branch, National Center for Health Services Research and Development, Rockville, MD

1975/77- Instructor in Medicine, Harvard Medical School, Boston, MA

1975/79- Associate in Medicine, Beth Israel Hospital, Boston, MA

1976/79- Tutor in Medical Sciences, Harvard Medical School, Boston, MA

1977/79- Assistant Professor of Medicine, Harvard Medical School, Boston, MA

- 1979/81 - Chief, Heart Station and Exercise Laboratory, VA Medical Center, Long Beach, CA
- 1979/81 - Director, Cardiovascular Training, VA Medical Center, Long Beach, CA
- 1979/81 - Assistant Professor of Medicine, University of California, Irvine, CA
- 1981/85 - Chief, Cardiology Section, VA Medical Center, Cincinnati, OH
- 1981/87 - Associate Professor of Medicine, University of Cincinnati, Cincinnati, OH
- 1983/85 - Health Services Research and Development Coordinator, VA Medical Center, Cincinnati, OH
- 1985/87 - Program Director, MEDIPRO Pilot Project, VA Medical District 13, Cincinnati, OH
- 1987/88 - Project Manager, Clinical Indicators, Joint Commission on Accreditation of Healthcare Organizations, Chicago, IL
- 1988/89 - Expert Consultant, Health Care Financing Administration, Baltimore, MD
- 1988/ - President, Michael Pine and Associates, Inc., Chicago, IL
- 1988/01 - Research Associate (Assistant Professor), University of Chicago, Chicago, IL
- 2005/ - Lecturer, Department of Medicine, Section of Cardiology, University of Chicago, IL

Honors:

- 1961 - Lila Perlman Memorial Award
- 1962 - Phi Beta Kappa
- 1962 - Louis D. Brandeis Honorary Scholarship
- 1970/72 - National Institutes of Health Special Fellowship

1984/87- VA Executive Medicine Program

1987 - Delta Mu Delta National Business Honor Society

1987 - Beta Gamma Sigma National Business Honor Society

Memberships:

1976 - Fellow, Council on Clinical Cardiology, American Heart Association

1977 - Fellow, American College of Cardiology

1978 - Member, American Federation of Clinical Research

1979 - Member, American Physiological Society

1980 - Fellow, American College of Physicians

1983 - Member, Society for Medical Decision Making

1986 - Member, American College of Physicians Executives

Certification:

1967 - Diplomate, Board of Medical Examiners

1973 - Diplomate, Board of Internal Medicine

1975 - Diplomate, Subspecialty Board in Cardiovascular Disease

1984 - Instructor, Advanced Cardiac Life Support, American Heart Association

Licensure:

1967 - New York (98928)

1973 - Colorado (10224)

1975 - Massachusetts (37994)

1979 - California (G-40251)

1982 - Ohio (47170)

1987 - Illinois (036-075448)

Committees:

1977/78- Introduction to the Patient Planning and Coordinating Committee, Beth Israel Hospital, Boston, MA

- 1979/81 - Human Studies Committee, VA Medical Center, Long Beach, CA
- 1981/85 - Chairperson, MICU Committee, VA Medical Center, Cincinnati, OH
- 1981/85 - Chairperson, CPR Committee, VA Medical Center, Cincinnati, OH
- 1982/84 - Chairperson, Research Space Committee, VA Medical Center, Cincinnati, OH
- 1982/85 - CPR Committee, University of Cincinnati Medical Center, Cincinnati, OH
- 1985/86 - MEDIPRO Board and Protocols Task Force, VA Central Office, Washington, DC
- 1987/88 - Task Force on Uniform Clinical Data Set, Health Care Financing Administration, Baltimore, MD
- 1987/88 - Chairperson, Sub-Task Force on Algorithm Development, Health Care Financing Administration, Baltimore, MD
- 1990/93 - Member, Editorial Advisory Board, Clinical Outcomes, Health Sciences Institute, Philadelphia, PA
- 1992/94 - Chairperson, Subcommittee on Quality of Patient Care, Illinois Chapter of the American College of Cardiology, Chicago, IL
- 1995/96 - Chairperson, Cardiac Catheterization Subcommittee of the Quality, Ohio Department of Health, Columbus, OH
- 2000/03 - Member of Subcommittee on Outcomes Research, Clinical and Laboratory Standards Institute (formerly NCCLS), Philadelphia, PA.

ORIGINAL MANUSCRIPTS

1. Pine M, Favrot L, Smith S, McDonald K, Chidsey CA. Correlation of plasma propranolol concentration with therapeutic response in patients with angina pectoris. *Circulation*. 1975 Nov;52(5):886-93.
2. Pine M, Beach PM, Cottrell TS, Scola M, Turino GM. The relationship between right duct lymph flow and extravascular lung water in dogs given alpha-naphthylthiourea. *J Clin Invest*. 1976 Aug;58(2):482-92.
3. Paton BC, Pine M. Aortic valve replacement with the De Bakey Valve. *J Thorac Cardiovasc Surg*. 1976 Oct;72(4):652-6.
4. Pine M, Hahn G, Paton B, Pappas G, Davies DH, Steele P, Pryor R, Blount SG Jr. Homograft and prosthetic aortic valve replacement: a comparative study. *Circulation*. 1976 Dec;54(6 Suppl):III84-9.
5. Radvany P, Pine M, Weintraub RM, Abelmann WH, Bernhard WF. Mechanical circulatory support in post-operative cardiogenic shock. *J Thorac Cardiovasc Surg*. 1978 Jan;75(1):97-103.
6. Pine M, Bing, O.H.L, Brooks, W. W, Abelmann WH. Changes in in vitro myocardial hydration and performance in response to transient metabolic blockade in hypertonic, isotonic and hypotonic media. *Cardiovasc Res*. 1978 Oct;12(10):569-77.
7. Gaasch WB, Bing, OH, Pine M, Franklin A, Clement J, Rhodes D, Phear PJ, Weintraub RM. Myocardial contracture during prolonged ischemic arrest and reperfusion. *Am J Physiol*. 1978 Dec;235(6):H619-27.
8. Pine M, Bing OH, Weintraub R, Abelmann WH. Dissociation of cell volume regulation and sodium-potassium exchange pump activity in dog myocardium in vitro. *J Mol Cell Cardiol*. 1979 Jun;11(6):585-90.
9. Pine M, Caulfield JB, Bing OH, Brooks WW, Abelmann WH. Resistance of contracting myocardium to swelling with hypoxia and glycolytic blockade. *Cardiovasc Res*. 1979 Apr;13(4):215-24.
10. Pine M, Rhodes D, Thorp K, Tsai Y. Anion exchange and volume regulation during metabolic blockade of renal cortical slices. *J Physiol*. 1979 Dec;297(0):387-403.
11. Pine M, Kahne D, Jaski B, Apstein CS, Thorp K, Abelmann WH. Sodium permeability and myocardial resistance to cell swelling during metabolic blockade. *Am J Physiol*. 1980 July;239(1):H31-9.

12. Pine M, Bing OH, Weintraub R, Abelmann WH. Myocardial volume regulation after normothermic and hypothermic ischemic arrest in dogs. *Am J Physiol.* 1981 Nov;240(1):H116-25.
13. LaRaia PJ, Bing OH, Gaasch WH, Levine FH, Pine M, Spardaro J, Crawford FD, Weintraub RM. Myocardial protection by coronary washout during global ischemic arrest. *J Surg Res.* 1981 Sep;31(3):179-87.
14. Pine M, Brooks WW, Nosta JJ, Abelmann WH. Hydrostatic forces limit swelling of rat ventricular myocardium. *Am J Physiol.* 1981 Nov;241(5):H740-7.
15. Pine M, Citron PD, Bailly DJ, Butman S, Plasencia GO, Landa DW, Wong RK. Verapamil versus placebo in relieving stable angina pectoris. *Circulation.* 1982 Jan;65(1):17-22.
16. Pine M, Borg TK, Caulfield JB. Regulation of atrial myocardial cellular volume during exposure to isosmotic high potassium or hyposmotic media. *J Mol Cell Cardiol.* 1982 Apr;14(4):207-21.
17. Frishman W, Kirsten E, Klein M, Pine M, Johnson SM, Hills LD, Packer M, Kates R. Clinical relevance of verapamil plasma levels in stable angina pectoris. *Am J Cardiol.* 1982 Nov;50(5):1180-4.
18. Pine M, Oren M, Ciafone R, Rosner B, Hirota Y, Rabinowitz B, Abelmann WH. Excess mortality and morbidity associated with right bundle and left anterior fascicular block. *J Am Coll Cardiol.* 1983 May;1(5):1207-12.
19. Javeheri S, Kennealy J, Runck CD, Loudon RG, Pine M, Myers RE. Cerebrospinal fluid ions in metabolic acidosis in dogs: effects of acetazolamide. *J Appl Physiol.* 1986 Aug;61(2):633-9.
20. Pine M, Morgan DD, Beller RH. Potential effectiveness of comparative casemix-corrected adverse outcome rates as quality monitors in a simulated hospital system. *Med Decis Making.* 1989 Apr-Jun;9(2):104-15.
21. Pine M, Morgan DD, Beller RH. Potential effectiveness of quality assurance screening using large but imperfect databases. *Med Decis Making.* 1990 Apr-Jun;10(2):126-34.
22. Smith DW, Pine M, Bailey RC, Jones B, Brewster A, Krakauer H. Using clinical variables to estimate the risk of patient mortality. *Med Care.* 1991 Nov;29(11):1108-29.
23. Shaller DV, Pine M, Naessens JM, Ballard DJ. Greater cost-effectiveness in health care delivery: using public and employer claims data to mobilize support. *Group Practice Journal.* 1992;41:24-35.
24. Smith DW, McFall SL, Pine M. State rate regulation and inpatient mortality rates. *Inquiry.* 1993 Spring;30(1):23-33.

25. Ballard DJ, Bryant SC, O'Brien PC, Smith DW, Pine M, Cortese DA. Referral selection bias in the Medicare hospital mortality prediction model: are centers of referral for Medicare beneficiaries necessarily centers of excellence? *Health Serv Res.* 1994 Feb;28(6):771-84.
26. Cooper GS, Chak A, Harper DL, Pine M, Rosenthal GE. Care of patients with upper gastrointestinal hemorrhage in academic medical centers: a community-based comparison. *Gastroenterology.* 1996 Aug;111(2):385-90.
27. Pine M, Norusis M, Jones B, Rosenthal GE. Predictions of hospital mortality rates: a comparison of data sources. *Ann Intern Med.* 1997 Mar 1;126(5):347-54.
28. Pine M, Jones B, Lou Y. Laboratory values improve predictions of hospital mortality. *Int J Qual Health Care.* 1998 Dec;10(6):491-501.
29. Plogman PL, Pine M, Reed DC, Byrwa KJ, Berman JI. Anthem Blue Cross and Blue Shield's coronary services network: a managed care organization's approach to improving the quality of cardiac care for its members. *Am J Manag Care.* 1998 Dec;4(12):1679-86.
30. Pasternak DP, Pine M, Nolan K, French R. Risk-adjusted measurement of primary cesarean sections: reliable assessment of the quality of obstetrical services. *Qual Manag Health Care.* 1999 Fall;8(1):47-54.
31. Pine M. Episodes in action: linking the cost and quality of nonsurgical coronary revascularization. *Manag Care Q.* 2001 Summer;9(3):25-33.
32. Pine M, Holt K, Lou Y. Surgical mortality and type of anesthesia provider. *AANA J.* 2003 Apr;71(2):109-16.
33. Blankstein, R, Ward RP, Arnsdorf M, Jones B, Lou Y, Pine M. Female gender is an independent predictor of operative mortality after coronary artery bypass graft surgery. *Circulation.* 2005 Aug 30;112(9 Suppl):I323-7.
34. Fry DE, Pine MB, Jordan HS, Hoaglin DC, Jones B, Meimban R. The hazards of using administrative data to measure surgical quality. *Amer Surg.* Nov 2006;Vol 72(11):1031-1037.
35. Pine M, Fry D. Linking processes and outcomes to improve surgical performance: a new approach to morbidity and mortality peer review. *Amer Surg.* Nov 2006;Vol 2(11):1115-1119.
36. Pine M; Jordan HS, Elixhauser A, Fry DE, Hoaglin DC, Jones B, Coleman K, Meimban R, Deitz D, Warner D, Gonzales J. Enhancement of claims data to improve risk adjustment of hospital mortality. *JAMA.* 2007 Jan 3;297(1):71-76.

37. Jordan HS, Pine M, Elixhauser A, Hoaglin DC, Fry D, Coleman K, Deitz D, Warner D, Gonzales J, Friedman Z. Cost-Effective enhancement of claims data to improve comparisons of patient safety. *J Patient Saf* 2007 June;3(2):82-90.
38. Constanzo MR, Johannes RS, Pine M, Gupta V, Saltzberg M, Hay J, Yancy CW, Fonarow GC. The safety of intravenous diuretics alone versus diuretics plus parenteral vasoactive therapies in hospitalized patients with acutely decompensated heart failure: A propensity score and instrumental variable analysis using the Acutely Decompensated Heart Failure National Registry (ADHERE) database. *Am Heart J* 2007 Aug;154(2):267-277.
39. Fry DE, Pine M, Jordan HS, Elixhauser A, Hoaglin DC, Jones B, Warner D, Meimban R, Combining administrative and clinical data to stratify surgical risk. *Ann Surg.* 2007 Aug;246(2).

BOOKS, CHAPTERS, REVIEWS, AND OTHER PUBLICATIONS

1. Turino GM, Pine M, Shubrooks SJ Jr, Carey J P. The volume of extravascular water of the lung in normal man and in disease. *Bull Physiopathol Respir(Nancy)*. 1971 Nov-Dec;7(6):1161-79.
2. Chidsey C, Pine M, Favrot L, Smith S, Leonetti G, Morselli P, Zanchetti A. The use of drug concentration measurements in studies of the therapeutic response to propranolol. *Postgrad Med J.* 1976;52 Suppl 4:26-32.
3. Turino GM, Pine M, Beach PM, Cottrell TS. The regulation of pulmonary lymph flow in ANTU pulmonary edema in the dog. In: Paintall AS, Gill-Kuman P, editors. *Respiratory adaptation, capillary exchange and reflex mechanisms*. New Delhi: Navchetan Press.; 1977. p. 189-98.
4. Lipton SA, Markis JE, Pine M, Paulin S, Lindsay HE. Cessation of smoking followed by Prinzmetal's variant angina and diffuse esophageal spasm. *N Engl J Med.* 1978 Oct;299(14):775-6.
5. Pine M, Caulfield JB, Abelmann WH. Regulation of myocardial cell volume. In: Bourne GH, editor. *Heart and heart-like organs*. Vol. 3. New York: Academic Press; 1980. p. 45-75.
6. Pine M, Aronow WS. The treatment of ventricular premature complexes. *Ration Drug Ther.* 1980 Nov;14(11):1-5.
7. Pine M. Excess mortality and morbidity in bifascicular block. *Primary Cardiol.* 1986;12(12):19-26.
8. Pine M. Young men with tortimentis: decision theory in clinical practice. *Hosp Physician.* 1987;23(10):69-75.

9. Pine M, Smith D. Does hospital mortality predict quality? *N Engl J Med.* 1988;318:1623.
10. Pine M. Commentary: The Joint Commission on Accreditation of Healthcare Organizations. In: Goldfield N, Nash DB, editors. *Providing quality care.* Philadelphia: American College of Physicians; 1989. p. 222-223.
11. Pine M, Smith DW. Severity-of-illness systems: An overview for medical directors – Part one. *Physician Exec.* 1990 Mar-Apr;16(2):10-4.
12. Pine M, Smith DW. Severity-of-illness systems: An overview for medical directors – Part two. *Physician Exec.* 1990 May-Jun;16(3):19-22.
13. Pine M. External monitoring of quality: what can be done without an organization's consent and what can be accomplished through collaboration. *Clinical Outcomes.* 1990;1:2-3.
14. Pine M. The use of large databases to monitor and manage the quality of health care. In: Couch JB, editor. *Health Care Quality Management for the 21st Century.* Tampa: American College of Physician Executives; 1991
15. Klionsky M, Pine M. The effect of unproved cancer therapy in advanced cancer. *N Engl J Med.* 1991;325:1104.
16. Goldfield N, Pine M, Pine J. *Measuring and managing health care quality.* Gaithersburg: Aspen Publishers; 1991, 1992, 1993, 1994, 1995, 1996, 1997, 1998, 1999.
17. Kongstvedt P, Pine M. Quality management. In: Kongstvedt PR, editor. *Managed health care handbook.* 2nd ed. Gaithersburg: Aspen Publishers; 1992.
18. Pine M, Bachofer H, Pine J, Rosmann J. (Coopers & Lybrand and Michael Pine and Associates, Inc.). 1992. *Guide to Designing and Implementing a Value-Centered Benefits Plan for Employee Health Care.* Health Action Council of Northeast Ohio.
19. Pine M, Pine J. Combining information about process and outcomes to improve clinical care. *Physician Exec.* 1993 Jan-Feb;19(1):9-12.
20. Pine M. The quality encounter between purchasers and providers: what to ask and how to answer. *Manag Care Q.* 1993 Spring;1(2):4-12.
21. Smith DW, Bailey RC, Brewster A, Pine M, Jones B, Krakauer H. Data about mortality. *Med Care.* 1993 May;31(5):469-70.
22. Balsamo R, Pine M. Assessing the quality of quality monitoring. *Clinical Outcomes.* 1993;4(2):1-2.
23. Balsamo R, Pine M. Using data on providers' performance to purchase high value health care services. *Managing Employee Health Benefits.* 1993;2(1):8-15.

24. Balsamo R, Pine M. Twelve questions to ask about your outcomes monitoring system - Part one. *Physician Exec.* 1994 Apr;20(4):13-6.
25. Balsamo R, Pine M. Twelve questions to ask about your outcomes monitoring system - Part two. *Physician Exec.* 1994 May;20(5):22-25.
26. Pine M, Harper DL. Designing and using case mix indices. *Manag Care Q.* 1994 Summer;2(3):1-11.
27. Balsamo R, Pine M. Important considerations in using indicators to profile providers. *Physician Exec.* 1995 May;21(5):38-45.
28. Pine M, Pine J. Standardization of terms and analytic methods for performance evaluation: achievable goal or impossible dream? *Manag Care Q.* 1995 Summer;3(3):7-14.
29. Pine M, Harper DL. Designing and using casemix indices. In: Goldfield N, Boland P, editors. *Case mix and risk adjustment of clinical data.* Gaithersburg: Aspen Publishers; 1995.
30. Pine M, Berman JI, Byrwa K. Forming a coronary services network on the basis of quality of care. *Qual Manag Health Care.* 1996 Winter;4(2):14-23.
31. Pasternak D, Pine M. Meet the mandate to measure clinical quality. *Physician Exec.* 1997 Sep-Oct;23(7):40-3.
32. Pine M. Introduction to the measurement of clinical outcomes. In: Kongstvedt PR, Plocher DW, editors. *Best Practices in Medical Management.* Gaithersburg: Aspen Publishers; 1998. Chapter 34.
33. Pine M. Crafting valid, relevant measures of clinical performance. In: Kongstvedt PR, Plocher DW, editors. *Best Practices in Medical Management.* Gaithersburg: Aspen Publishers; 1998. Chapter 35.
34. Pine M. Introduction to the management of clinical outcomes. In: Kongstvedt PR, Plocher DW, editors. *Best Practices in Medical Management.* Gaithersburg: Aspen Publishers; 1998. Chapter 36.
35. Pine M. Results of laboratory tests for improving risk adjustment for comparisons of hospitals' outcomes. *Am Clin Lab.* 1999 May;18(4):10-1.
36. Emery DW, Pine M. Episodes of care: The scope and sequence of medical reality. In: Emery D, editor. *Global fees for episodes of care.* New York: McGraw-Hill; 1999. Chapter 2.
37. Berman JI, Pine M, Emery DW. Anthem Health Plan's Cardiology Services Network. In: Emery D, editor. *Global fees for episodes of care.* New York: McGraw-Hill; 1999. Chapter 19.

38. Pine M. Marketing Clinical Outcomes. In: Ransom SB, Pinsky WW, editors. Clinical resource & quality management. Tampa: American College of Physician Executives; 1999. Chapter 4.
39. Pine M. Measuring and managing of clinical outcomes. In: Kongstvedt, PR. Managed health care handbook. 4th ed. Gaithersburg: Aspen Publishers; 2001. Chapter 31.
40. Goldfield N, Pine M, Pine J. Measuring and managing health care quality. 2nd ed. Gaithersburg: Aspen Publishers. 2001.
41. Pine M, Pine J. Creating information systems to support effective, efficient health care. In: Emery DW, editor. Customer-directed healthcare reform with episode pricing. Thomson Publishing; 2006. Chapter 8.
42. Pine M, Jordan HS, Elixhauser A, Fry DE, Hoaglin DC, et al. Hospital Mortality Risk Adjustment Using Claims Data. [Letters in Reply] JAMA 2007; 297: 1983-4

PUBLISHED ABSTRACTS

(* = presentation at scientific meeting)

- *1. Pine M, Beach PM, Cottrell T, Scola M, Turino G. Relationship of right duct lymph flow to extravascular lung water in dogs given alpha-naphthylthiourea. *Circulation*. 1972;46:II-55.
- *2. Pine M, Favrot L, Smith S, Niccoli A, Chidsey C. Plasma propranolol as an index of maximum therapeutic response in angina. *Circulation*. 1974;50:II-78.
3. Favrot L, Pine M, Smith S, McDonald K, Chidsey C. The effects of propranolol on exercise plasma renin activity in patients with angina. *Clin Res*. 1975;23:182A.
- *4. Pine M, Hahn G, Paton B, Pappas G, Steele P, Pryor R, Blount SG Jr. Prosthetic and homograft aortic valve replacement: a comparative study. *Circulation*. 1975;52:II-30.
5. Pine M, Bing OH, Abelmann WH. Absence of in vitro swelling of myocardium with hypoxia and glycolytic blockade. *Clin Res*. 1976;24:420A.
6. Pine M, Bing O.H, Brooks WW, Abelmann WH. Effect of metabolic blockade on myocardial performance and control of tissue volume. *Clin Res*. 1976;24:619A.
7. Pine M, Bing OH, Lustig R, Abelmann WH. Effect of metabolic blockade on water and electrolytes in isolated contracting myocardium. *Clin Res*. 1976;24:619A.
- *8. Pine M, Bing OH, Abelmann WH. Comparison of changes in tissue water and electrolytes after metabolic blockade and after inhibition of the Na-K exchange pump in heart and kidney slices. *Am J Cardiol*. 1977;39:313.

- *9. Pine M, Bing OH, Abelmann WH. Myocardial performance, electrolytes, and water in two models of injury produced by metabolic blockade of isolated contracting rat myocardium. *Am J Cardiol.* 1977;39:312.
- 10. Radvany P, Pine M, Weintraub RM, Abelmann WH, Bernhard WF. Recovery of ventricular function after complete dependence on a mechanical left ventricular assist device. *Clin Res.* 1977;25:246A.
- *11. Pine M, Caulfield JB, Bing OH, Abelmann WH. Absence of cell swelling following metabolic blockade of myocardium. *Circulation.* 1977;56:III-71.
- 12. Pine M, Bing OH, Tsai Y, Abelmann WH. Renal Cortical Cell Swelling in High K⁺ Solution: Inhibition by Metabolic Blockade. *Clin Res.* 1978;26:473A.
- *13. Pine M, Bing OH, Abelmann WH. Relative Resistance of Myocardium to Edema Formation. *Clin Res.* 1978;26:260A.
- *14. Pine M, Abelmann W.H. Anion exchange and cell volume during metabolic blockade. *Fed Proc.* 1979;38:995.
- 15. Pine M, Kahne D; Jaski B, Abelmann WH. Sodium permeability and myocardial resistance to cell swelling during metabolic blockade. *Clin Res.* 1979;27:195A.
- *16. Pine M, Caulfield JB, Abelmann WH. Reduction of myocardial resistance to edema formation by stretch. *J Mol Cell Cardiol.* 1979;11(1 Suppl):49.
- 17. LaRaia PJ, Crawford FD, Bing OH, Gaasch WH, Pine M, Spadaro J, Weintraub RM. Myocardial protection by coronary washout during global ischemic arrest. *Circulation.* 1979;60:II-35.
- *18. Pine M, Bing, OH, Weintraub RM, Abelmann WH. Preservation of myocardial volume regulation during hypothermic ischemic arrest. *Circulation.* 1979;60:II-96.
- *19. Pine M. Hydrostatic forces prevent ventricular swelling. *Clin Res.* 1980;28:12A.
- *20. Pine M, Borg, T, Caulfield JB. Role of myocardial collagen in cell volume regulation. *Fed Proc.* 1981;40:474.
- 21. Pine M, Citron D, Bailly D, Butman S, Plasencia G, Wong R, Landa D. Verapamil improves exercise tolerance in stable angina pectoris. *Clin Res.* 1981;29:231A.
- 22. Gaasch WH, Bing OH, Pine M, LaRaia PJ, Franklin A, Rhodes D, Weintraub RM. Myocardial protection during ischemic arrest: relation of arrest temperature to myocardial edema and ventricular function after reperfusion. *Clin Res.* 1982;30:187.
- 23. Richards IS, Otto DG, Pine M. Resistance to swelling in cardiomyocytes in cell culture. *Clin Res.* 1984;32:200A.

24. Richards IS, Otto DG, Pine M. Volume regulation of ventricular cardiomyocytes in high potassium medium. *J Mol Cell Cardiol.* 1984;16(1 Suppl):30.
- *25. Pine M, Morgan D, Beller RH. Potential effectiveness of casemix corrected quality assurance screening using large but imperfect databases. *Medical Decision Making.* 1987;7:285.
- *26. Pine M, Smith D, Roizen MF, Schreider B, Parsons R, Ferguson M. National norms and your surgical mortality rates: how anesthesia records help. *Anesthesiology.* 1989;71:A919.
- *27. Pine M, Norusis M, Harper D. Adequacy of Administrative versus physiological data for performance monitoring. *Circulation.* 1994;90(Part 2):I-44.
28. Kelly JF, Gruppen LD, Helfrick JF, Pine M, Carberry A. Training opinion-leaders in the dissemination of innovations. *Journal of Dental Research.* 1995;745SI:81.
29. Gruppen LD, Kelly JF, Helfrick JF, Pine M, Carberry A. Using small groups to disseminate practice guidelines. *Journal of Dental Research.* 1995;745SI:81.
- *31. Pine M, Norusis M, Jones B, Wall T. Using prolonged risk-adjusted post-operative length of stay (RAPOLOS) to measure comparative surgical performance in CABG procedures. *JACC.* 1997;29(2 Suppl A):103A-4A.
- *34. Blankstein R, Ward RP, Arnsdorf M, Jones B, Lou Y, Pine M. Hospital bias and gender both affect choice of procedure for first time coronary revascularization. *Circulation.* 2003 Oct 28;108(17 Suppl):IV769-70.
35. Blankstein R, Ward RP, Arnsdorf M, Jones B, Lou Y, Pine M. Female gender is an independent predictor of operative mortality after coronary artery bypass graft surgery. *Circulation.* 2004 Oct 26;110(17 Suppl):III420.
36. Pine M, Hoaglin D, Jones B, Meimban R, Jordan H. Enhancing administrative data to improve the validity of comparisons of risk-adjusted inpatient quality indicators for cardiovascular care. *Circulation.* 2006 Oct 31;114:18:(II Suppl):4019-II864-865.

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