

RESUME and CV

Marshall de Graffenried Ruffin, Jr., M.D.
MPH, MBA, CPE, FACPE, FAAPL

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CITIZENSHIP: United States of America; born in Washington, DC.

FORMAL EDUCATION:

The University of Virginia, Charlottesville, Virginia. 1970-1974. Degree awarded: B.A. in English with High Distinction in 1974. Member of Phi Beta Kappa and Raven Society. President of the Tuesday Evening Concert Series.

Harvard Medical School, Boston, Massachusetts. 1974-1978. Degree awarded: M.D in 1978, with concentration in the neurosciences. Member of the Aesculapian Club.

Duke University Medical Center, Durham, N.C., Internal Medicine Residency 1978-1981.

Robert Wood Johnson Clinical Scholar, 1981-1983, at UNC Chapel Hill and Stanford.

University of North Carolina, Chapel Hill, N.C. 1981-1982. Degree awarded: M.P.H. in Epidemiology, 1983.

Graduate School of Business, Stanford University, Stanford, California. 1982-1984. Degree awarded: M.B.A. in Health Economics, 1984. Kaiser Family Foundation Scholar.

CERTIFICATION:

Diplomate of the National Board of Medical Examiners, 1979.

Certified in Internal Medicine by the American Board of Internal Medicine, 1981.

Certified in Medical Management (CMM) by the American Board of Medical Management, 1992.

Certified Physician Executive (CPE) by the American College of Physician Executives, 1998.

FELLOWSHIP:

Fellow of the American College of Physician Executives, May 13, 1993.

Distinguished Fellow of the American College of Physician Executives, May 15, 1997.

LICENSES:

Active:

Virginia: Issued 8/27/81

California: Issued 7/26/82

Inactive:

Florida: Issued 8/06/84

North Carolina: Issued 5/09/81

FAMILY: Married 42+ years to Paula Thomas Ruffin, BSN, RN, CMT, MSN, PhD
We have four grown sons.

EMPLOYMENT:

RUFFIN HEALTH, LLC – December, 2021 – Present

Title: **Founder and CEO**

I created Ruffin Health, LLC, as a contracting vehicle for me to consult on the application of health care technologies, electronic medical records and predictive analytics with health care organizations, health care insurers, venture capital and private equity firms.

SALUTARY, INC (formerly Progknowse, Inc.) – November, 2017 to November, 2021

Title: **President and CEO**

Salutary, Inc., was sold in November, 2021. It was an early-stage predictive analytics company for the health care industry. In July, 2018, Premier, Inc., became our strategic partner and our principal source of funding. In 2019, we changed the name of the

business from Progknowse, Inc. to Salutory (which means healthful, beneficial and profitable). Salutory had contracts with five health care systems, access to full EMR data on 5.7 million people, and close working relations with post-doctoral data scientists at the Harvard Medical School. Working closely with our health system partners, we built a state-of-the-art platform for creating predictive models for outcomes of care. We created three models for perinatal complication (preeclampsia, premature birth, postpartum hemorrhage) that were more accurate than any described in the published literature.

INOVA PREDICTIVE ANALYTICS – July, 2016 – November, 2017

Title: Entrepreneur and Founder

I worked full time to develop the business idea that later became Salutory. The leadership team of Inova was changing, the long-time CEO had announced his retirement in summer, 2017, and Inova chose not to invest in Salutory, which was funded by Premier, Inc., in July, 2018.

INOVA HEALTH SYSTEM – April, 2011, to June, 2016

Title: Executive Vice President and Chief Technology Officer

My office reported to the CEO, Knox Singleton, for strategy and innovation, and to the President and COO, Mark Stauder, for daily operations. (In late summer, 2017, Knox announced his retirement from Inova effective July 1, 2018). My job at Inova was to guide Inova's investment in and use of technologies to become a high-performing health care system in the coming era of reduced funding, accountable care organizations and reimbursement based on clinical outcomes of patients. My focus was to organize Technology Services as a key functional division serving all of Inova's five hospitals, 1,800 inpatient beds, 5,000 affiliated physicians and corporate offices. Technology Services included these divisions: Inova Information Technology, Inova Clinical Engineering, Inova Medical Records, a Inova PMO (Program Management Office), Inova Analytics, Inova Telemedicine and Inova Informatics, employing over 500 people with an annual operating budget, including the EpicCare program, of more than \$150M in 2016.

I led a 10 year, \$400M capital project to implement all clinical and financial information systems from Epic Systems in all Inova facilities. We moved very quickly. All clinical and revenue cycle applications from Epic we had implemented for the entire Inova Health System 26 months after contract signing with Epic. We were successful, on time and on budget (allowing for substantial expansion in scope from the original budget), with five hospitals and more than 300 ambulatory sites implemented, including the flagship Inova Fairfax Hospital. Epic awarded Inova a very high score of 90 for its "Good Install" of Epic software.

Immediately after implementing Epic software for Inova, my team successfully extended Inova's instance of Epic software to Valley Health, a 6 hospital system in the Shenandoah Valley, Virginia and West Virginia, to 20 ambulatory clinic locations (April, 2014) and all six hospitals (May, 2014). From contract signing to completion of software implementation for Valley Health we needed only 10 months, finishing on time and on budget, with a good install score from Epic even higher than the excellent score Epic gave to my team at Inova.

Under my guidance, Inova was building a comprehensive data warehouse and associated analytical systems with Epic's Cogito platform, using Business Objects tools.

Under my guidance, Inova completed an Enterprise Imaging initiative to replace all imaging stores with a single vendor neutral archive (Fuji Synapse) and single radiology and cardiology imaging platform using Epic Radiant (for Radiology) and Epic Cupid and Fuji Synapse for Cardiology. The VNA will be used across all Inova facilities, inpatient and outpatient, and all clinical specialties capturing images. We are implementing a comprehensive network architecture redesign to improve bandwidth (wired and wireless) and cybersecurity.

My divisions was under budget every year I worked at Inova – except for spending more money on implementation of Epic in the first year of our implementation, due entirely to enormous expansion in the number of ambulatory sites in which we installed Epic.

From June, 2016 to November, 2017 I worked entirely on the business idea I conceived that became Salutary, Inc. The investment committee of Inova, let by Knox Singleton, voted unanimously twice to finance Salutary, but Knox's retirement and Mark Stauder's strained relationship with Premier led me to pursue seed funding for Salutary with Premier.

You will see below that also I worked for Inova Health System from 1988-1995.

UNIVERSITY OF VIRGINIA HEALTH SYSTEM – May 12, 2008, to April 15, 2011
Title: **Chief Technology and Health Information Officer**

My office reported to the CEO and COO of the UVA Medical Center and had operational responsibility for the Medical Laboratories, Radiology, Clinical Engineering, Health Information Services (Medical Records), Health System Computing Services (Information Systems), the Program Management Office and Enterprise Architecture of the Medical Center, including more than 750 full-time equivalent personnel, gross revenue of \$500M, operating expenses of about \$90M and capital budget of over \$35M per year. We implemented a comprehensive, integrated electronic medical record system from Epic. In 25 months from contract signing, we implemented EpicCare Ambulatory in 146 clinics, involving 1,200 physicians (including house staff) and 1,500

other employees, Epic Beacon in the Cancer Center, and EpicCare Inpatient in UVA Medical Center – on time and on budget. We established an enterprise architecture for information management, a Technology Assessment and Governance program for all medical technologies and the Program Management Office (PMO) for UVA Health System.

HEALTH INFORMATION TECHNOLOGY STANDARDS ADVISORY COMMITTEE (HITSAC) of the Information Technology Investment Board of the Commonwealth of Virginia

– July 1, 2009 to July 1, 2017

Title: **Chairman**

This committee of five persons, established by the Virginia General Assembly and signed into law by Governor Kaine in 2009, became official on July 1, 2009, to determine the standards for health information technology for the Commonwealth.

During Governor McDonnell's administration, in the spring of 2010, Secretary of Technology Jim Duffey and Secretary of Health and Human Resources, Bill Hazel, MD, asked HITSAC to define the standards to implement the Medicaid Information Technology Architecture (MITA) according to the design of the federal government for all of the agencies of Health and Human Resources – to create the eHHR electronic architecture. HITSAC used the architecture of the Commonwealth of Virginia Health Information Exchange (COV-HIE), which the TIC (see below) designed to the specifications of HITSAC, to implement the MITA framework for state government. The eHHR was operational in early 2014.

HEALTH INFORMATION TECHNOLOGY ADVISORY COMMISSION

January 1, 2010 to 2012

Title: **Chairman of the Technical Infrastructure Committee (TIC)**

The HIT Advisory Commission was created by Governor Tim Kaine, and continued by Governor McDonnell, to design and implement the Commonwealth of Virginia Health Information Exchange for which the Commonwealth of Virginia received \$11.6M in funding from the Federal Government in January, 2010. I was appointed by Governor Kaine to serve as Chairman of the Technical Infrastructure Committee responsible for designing the health information exchange, following the standards promulgated by HITSAC, for which I serve as Chairman as well.

CONNECT VIRGINIA HEALTH INFORMATION EXCHANGE

2010 – July 1, 2017

Title: **Vice-Chairman**

I have served as the Vice-Chairman (Secretary of Health and Human Resources of the Commonwealth of Virginia, Bill Hazel, MD, is Chairman) of the ConnectVirginia

Governing Body and now of the ConnectVirginia Health Information Exchange, since 2010.

ACCENTURE, LLC. – April 7, 2003 to May 09, 2008

Title: **Partner, Strategy and Business Architecture, Health and Life Sciences**

I supported our commercial Health and Life Sciences practice and our Government Health practice in the USA (local, state and federal governments) and in other countries, focusing primarily on electronic medical record applications, clinical data repositories and health information exchanges. Clients with whom I worked were private health care systems and federal and state governments in the USA, Canada, England, China, Singapore and Australia. I played a leading role in sales of over \$2 Billion; I was the Clinical Director of the team that won the contract to design one of the four prototypes of the Nationwide Health Information Network for the United States. Ours was the largest contract awarded by ONC for which successfully we built our prototype to interconnect 15 health care facilities in four states (VA, WV, TN, KY) that had never exchanged patient-specific clinical data electronically.

Title: **Clinical Director, National Care Records Service Project for the National Health Service, United Kingdom** (October, 2003 – June, 2004)

My role was to lead the clinical team of doctors, nurses, physical therapists, pharmacists, laboratory technicians in the designing, building and testing of the functionality of clinical applications (primary and secondary care electronic medical records) and in the deployment of the electronic records to all clinicians in primary and secondary and community care settings in the East and Northeast of England, a territory roughly 2/5ths of England. NHS users in the Accenture territory included several hundred hospitals, several thousand ambulatory clinics and over ten thousand physicians and fifty thousand allied health professionals in the East and Northeast of England, a geographic area including roughly forty percent of England and 20,000,000 citizens.

THE INFORMATICS INSTITUTE - January 1, 1995 to April, 2003

Title: **President and Chief Executive Officer**

The Informatics Institute. taught or consulted on applied health care informatics for major health care organizations in Indianapolis, Los Angeles, San Francisco, Phoenix, Sacramento, Portland (ME), Bethesda (MD), Jacksonville, Nashville, Minneapolis and many other cities. Client organizations, including the Military Health System, Inova Health System, Catholic Health Initiatives, UniHealth, Clarian Health System, numbered in the hundreds. We offered consulting on many aspects of applied informatics, including electronic medical records, picture archiving and communication systems, data warehouse development, decision support and knowledge management for health care organizations.

UNIVERSITY OF VIRGINIA SCHOOL OF MEDICINE - July 1, 1997 to November, 2008

Title: **Assistant Professor of Medical Education**, Department of Public Health Sciences (formerly Health Evaluation Sciences), School of Medicine, University of Virginia, Charlottesville, VA. I have taught classes in data warehousing, informatics for outcomes management and informatics for profiling physicians and advised the development of a clinical data warehouse for the Medical Center.

Title: **Associate Professor of Medicine with a secondary appointment in the Department of Public Health Sciences**, - November, 2008 – May, 2011, when I left UVA to return to Inova.

INOVA HEALTH SYSTEM, INC. - January 1, 1990 to December 31, 1994

Title: **Clinical Information Officer**
Assistant Vice President, Health Services Research and Development
Program Director, Conference on “The Future of Integrated Health Care Systems”

My job was to catalyze the transformation of Inova Health System from a regional hospital system to an integrated health care system. As such, my principal activities were to plan and implement patient care information systems, decision support systems (including an enterprise-wide computer-based patient record for retrospective analysis, called the Inova Research Information System (IRIS)), clinical quality improvement and technology assessment programs, and a multimedia metropolitan area telecommunications network for videoconferencing.

I conceived and directed the Future of Integrated Healthcare Systems conference, held in Reston, Virginia, in November, 1991, 1992 and 1993 to sold-out audiences from fifty states and several foreign countries.

INOVA HEALTH SYSTEM - January, 1988 - January, 1990

Title: **Director, Health Services Research and Development, Inova Health System**
Senior Vice President, INTER+NET HEALTH SYSTEM, INC.

Inter+Net was a not-for-profit membership corporation of thirteen hospitals and affiliated physicians in metropolitan Washington formed by Inova Health System and Georgetown University Medical Center in 1987. By 1990, it had become a regional preferred provider organization (PPO) with more than 100,000 covered lives in its contracts. All the senior managers of Inter+Net were employees of Inova, "leased" to Inter+Net for their time. I spent one-half of my time at Inter+Net and one-half of my time at Inova from January, 1988, until January, 1990.

For Inter+Net I led the development a 24-hour-a-day call center staffed by nurses (using the Ask-A-Nurse franchise) that became the busiest health information center of its kind

in the USA. Other responsibilities of mine included building strong ties with physicians and hospitals affiliated with Inter+Net. At every hospital I helped to form a MeSH model corporation between the medical staff and hospital, to allow physicians to participate with their hospital in PPO contracts negotiated by Inter+Net.

UNIVERSITY OF WISCONSIN, MADISON - January, 1993 - July, 1994

Title: **Visiting Professor, Administrative Medicine Program, University of Wisconsin**

I was a member of the faculty of the Administrative Medicine program of the University of Wisconsin, and taught the medical informatics track to second year students.

AMERICAN COLLEGE OF PHYSICIAN EXECUTIVES

Title: **Faculty, Continuing Education Programs** – January, 1990 to December, 2003

I have taught many courses in applied informatics for the ACPE over the years, including Introduction to Informatics, Mastering Databases for Decision Support, Informatics for Outcomes Management, Informatics for Profiling Physicians, Informatics for Managing Care. One course, Implementing Information Systems: Building a Mandate for Change, is still available, I believe, on CD-ROM for distance learning.

UNIVERSITY HEALTH PARTNERS – May, 1986 – December, 1987

Title: Vice President and Medical Director

Helped to found an HMO (health maintenance organization) development firm that worked with university medical centers (University of Minnesota, Duke University, University of Virginia). I selected the information systems for that venture, which was meant to build high-quality health plans that used IT for structured data collection and distribution of best practices. We were ahead of our time when our principle investor, Jack Whitehead, who endowed the Whitehead Institute at MIT, became ill. We amicably dissolved operations in December, 1987.

WATSON CLINIC, Lakeland, Florida – July 1984 to May, 1986

Title: Medical Director

Watson Clinic is a multi-specialty group practice in Lakeland, Florida, with 75 physicians when I arrived and 120 physicians when I left to found University Health Partners. My role included being a permanent member of the Executive Committee of the Board of Directors and responsible for strategic planning and quality assurance. I practiced general internal medicine as well.

BOARDS OF DIRECTORS:

American College of Physician Executives: May, 1996 to May, 1999

Catholic Health East (not-for-profit health care system with more than 80 health care facilities in ten states, more than \$5 Billion in assets; more than \$4 Billion in annual revenue): 2001-2006; member of Finance and Quality committees.

State Alliance for eHealth of the National Governors Association: 2007-2008

ConnectVirginia, the state-wide health information exchange for the Commonwealth: 2010 to 2017 (Vice-Chairman).

Health Information Technology Standards Advisory Committee (HITSAC) for the Commonwealth of Virginia: 2009 to 2017 (Chairman).

The Watson Clinic, Lakeland, Florida, 1984-1986.

OTHER EXPERIENCE:

Summer Associate, The Office of Medical Economics and Statistics, Kaiser-Permanente Health Plan, 1924 Broadway, Oakland, CA. 1983

Staff Physician, The Urgent Care Clinic, Kaiser-Permanente Health Plan Hospital, Oakland, CA. (1 day each week). 1983

Emergency Room Physician, Veterans Administration Hospital, Palo Alto, CA. 1982-1984

Medical Consultant, to COMMTECH INTERNATIONAL MANAGEMENT CORPORATION, Inc., Menlo Park, CA. 1983-1984.

Robert Wood Johnson Clinical Scholar 1981-1983

Kaiser Family Foundation Scholarship Recipient, 1982-1984

Staff Physician, Coastal Emergency Physicians, P.A., Durham, N.C. 1981-1982

Associate in Medicine, the University of North Carolina Memorial Hospital, Chapel Hill, NC. 1981-1982.

PUBLICATIONS

Books Authored:

Digital Doctors, by **Marshall Ruffin, M.D.**, American College of Physician Executives Press, 1999.

Journal Articles Authored or Co-authored:

1. "Oliver Cope '28,' ... the spark that is his ", **Marshall Ruffin, M.D.**, The Harvard Medical School Alumni Bulletin, May/June 1976.
2. "Analysis of Length-of-stay Differences Between Investor-Owned and Voluntary Hospitals." Deborah Freund, Ph.D., **Marshall Ruffin, M.D.**, Richard Shachtman, Ph.D., and Dana Quade, Ph.D., Inquiry, 22(1), Spring, 1985.
3. "The Making of a Prepaid Plan." **Marshall Ruffin, M.D.**, The Group Practice Journal, May/June 1986, page 44 - 54.

4. "Entrepreneurship: Scorn or Esteem?" **Marshall Ruffin, M.D.**, The Group Practice Journal, March/April 1986.
5. "Hospitals and Managed Care," **Marshall Ruffin, M.D., et al**, a panel discussion in Issues and Answers in Managed Care, Volume 2, Number 2, June 1991, published by Lewin/ICF, Washington, D.C., pp. 4 - 15.
6. "Provoking Passion and Prescriptions," **Marshall Ruffin, M.D.**, The Healthcare Forum Journal, March/April 1992.
7. "The Organized Healthcare System," **Marshall Ruffin, M.D.**, The Healthcare Executive, July/August 1992.
8. "Medical Informatics," **Marshall Ruffin, M.D.**, The Healthcare Forum Journal, March/April 1993.
9. "Preparing for Managed Competition," **Marshall Ruffin, M.D.**, Physician Executive, January 1994, Vol 20, pp. 29-35.
10. "Medical Informatics for Physician Executives," **Marshall Ruffin, M.D.**, a chapter in the book, Physician Executive, Second Edition, published by the American College of Physician Executives, 1994.
11. "Inova Embarks on Mammoth Information Systems Plan," **Marshall Ruffin, M.D.**, Health Management Technology, Cover Story, April 1994, pages 20 – 26.
12. "The Future of Integrated Healthcare Information Systems," **Marshall Ruffin, M.D.**, an interview published in Health System Leader, Bader & Associates, Volume 1, Number 8, October 1994.
13. "The Informatics Institute: Why Do We Need It?" **Marshall Ruffin, M.D.**, Physician Executive, October 1994, Volume 20, pp. 39 – 40.
14. "The Importance of Data Warehouses for Physician Executives," **Marshall Ruffin, M.D.**, Physician Executive, November 1994, Volume 20, pp. 45 – 47.
15. "Talking with Marshall Ruffin: Picking The Health Care Winners in the 90's," **Marshall Ruffin, M.D.**, Managed Care Currents, December/January 1995, pp. 1 – 3.
16. "Changes and Choices for Providers," **Marshall Ruffin, M.D.**, The Conference Board, 1995, pp.13 – 16.
17. "Managed Care Information Needs; A Summary Perspective," **Marshall Ruffin, M.D.**, Physician Executive, January 1995, Volume 21, pp. 44 – 46.

18. "Getting the Most Benefit from Information System Consultants," **Marshall Ruffin, M.D.**, Physician Executive, March 1995, Volume 21, pp. 10 – 13.
19. "On Being Digital," **Marshall Ruffin, M.D.**, Physician Executive, April 1995, Volume 21, pp. 36 – 39.
20. "Informatics for the Transition from Managed Care to Organized Care," **Marshall Ruffin, M.D.**, Physician Executive, May 1995, Volume 21, pp. 31 – 33.
21. "Factors in a Successful Move to Organized Care Systems," **Marshall Ruffin, M.D.**, Physician Executive, June 1995, Volume 21, pp. 41 – 43.
22. "Capitation and Informatics," **Marshall Ruffin, M.D.**, Physician Executive, July 1995, Volume 21, pp. 21 – 25.
23. "New Governance for a New Era: Issues and Challenges for Integrating Systems," **Marshall Ruffin, M.D.**, Physician Executive, August 1995, Volume 21, pp. 45 – 47.
24. "Physician Profiling: Trends and Implications," **Marshall Ruffin, M.D.**, Physician Executive, October 1995, Volume 21, pp. 44 – 46.
25. "Developing and Using a Data Repository for Outcomes Management, The Genesis of IRIS," **Marshall Ruffin, M.D.**, The JCAHO Journal on Quality Improvement, October 1995, Volume 21.
26. "Physician Profiling: Trends & Implications," **Marshall Ruffin, M.D.**, Physician Executive, November 1995, Volume 21, pp. 34 – 37.
27. "Telemedicine: Where is Technology Taking Us?" **Marshall Ruffin, M.D.**, Physician Executive, December 1995, Volume 21, pp. 43 – 44.
28. "Many Chief Information Officers Will Be Physician Executives," **Marshall Ruffin, M.D.**, Physician Executive, February 1996, Volume 22, pp. 37 – 41.
29. "The World Wide Web Is Coming Soon to an Organization Near You," **Marshall Ruffin, M.D.**, Physician Executive, March 1996, Volume 22, pp. 39 – 42.
30. "The Politics of Informatics," **Marshall Ruffin, M.D.**, Physician Executive, April 1996, Volume 22, pp. 38 – 41.
31. "The Wonderful Evolution of Personal Computers," **Marshall Ruffin, M.D.**, Physician Executive, May 1996, Volume 22, pp. 41 – 45.

32. "Intranets Advance Medical Care," **Marshall Ruffin, M.D.**, Physician Executive, June 1996, Volume 22, pp. 32 – 37.
33. "Information Technology, Part 1: A Way to Streamline Medical Practice," **Marshall Ruffin, M.D.**, Physician Executive, July 1996, Volume 22, pp.37 – 40.
34. "Information Technology, Part 2: Interactive Media Enhances Medicine," **Marshall Ruffin, M.D.**, The Physician Executive, August 1996, pp. 46 – 48.
35. "Information Technology, Part 3: The Technology Hierarchy," **Marshall Ruffin, M.D.**, The Physician Executive, September 1996, pp. 50 – 52.
36. "Health care technology – information technology, Part 4. Why Will The Internet Be Important to Clinicians?" **Marshall Ruffin, M.D.**, The Physician Executive, October, 1996, pp. 53 – 54.
37. "Medical Informatics: The Future is Here," **Marshall Ruffin, M.D.**, The Physician Executive, November 1996, pp. 22 – 28.
38. "New, Customized News," **Marshall Ruffin, M.D.**, The Physician Executive, December 1996, pp. 41 – 43.
39. "Computers in medicine." **Ruffin M**; Libby RC Va Med Q 1996 Summer;123(3):182-3, 189 NLM CIT. ID: 96312139
40. "The Microprocessor and Medicine," **Marshall Ruffin, M.D.**, The Physician Executive, March 1997, pp.36 – 40.
41. "Haunts on the Web for Physician Executives," **Marshall Ruffin, M.D.**, The Physician Executive, April 1997, pp. 40 – 46.
42. "Where Does Informatics Fit In Health Care Organizations?" **Marshall Ruffin, M.D.**, The Physician Executive, May - June 1997, pp. 62 –64.
43. "Standardizing Medical Data," **Marshall Ruffin, M.D.**, The Physician Executive, 1997, Sep - Oct 23(7): 61-4.
44. "Information Systems for Capitation," **Marshall Ruffin, M.D.**, Chapter 11 of Capitation: A Practical Guide for the Medical Leader, published 1998 by the ACPE.
45. Digital Doctors, **Marshall Ruffin, M.D.**, 219 pages, published by the American College of Physician Executives, 1999 (available from Amazon.com and from the ACPE – 800-562-8088).

46. "Many Chief Information Officers Will Be Physician Executives," **Marshall Ruffin, M.D.**, MD Computing, November - December 1999, Volume 16, number 6, page 41.
47. "Building a Framework to Transform Health Care," **Marshall Ruffin, M.D.**, The Physician Executive, January - February 2000, volume 26, issue 1, pgs 51-58.
48. "Uses of the Internet for Medicine and Medical Practices," **Marshall Ruffin, M.D.**, Mecklenburg Medicine, Volume 30, Number 8, September 2000, pg 9.
49. "Managerial Applications of Information Technology," **Marshall Ruffin, M.D.**, a CD ROM production (video of lecture, PowerPoint slides, text of lecture, background reading) of a 2-day course taught for the American College of Physician Executives by Interact (Internet-based class participation over three-week period). Offered four to six times per year.
50. "Human Factors in Implementing Information Systems," **Marshall Ruffin, M.D.**, a CD ROM production (video of lecture, PowerPoint slides, text of lecture, background reading) of a 2-day course taught by the American College of Physician Executives by Interact (Internet-based class participation over three-week period). Offered four to six times per year.
51. "Data Warehousing, Improving Time and Cost Management," **Marshall Ruffin, MD**, MD Computing, January/February 2001, Volume 18, Number 1.
52. "Profile: LA Physician Sees Electronic Medical Record as Key to Better Public Health," **Marshall Ruffin, M.D.**, Physician Executive, September - October 2002, pp 28-30.
53. "Interoperability," **Marshall Ruffin, M.D.**, Healthcare Technology Project, Volume 3, November 14, 2005, Montgomery Research.
54. "Predictive Medical Care Models Improve Patient Experience and Outcomes," **Marshall Ruffin, M.D.** and Guy Masters, M.P.A., The Governance Institute, BoardRoom Press, August 2019, pages 5 – 11.
55. "Machine Learning for Patient Risk Stratification: Standing on, or looking over, the shoulders of clinicians?" Brett Beaulieu-Jones, PhD, William Yuan, PhD, Gabriel Bratt, Andrew Beam, Griffin Weber, **Marshall Ruffin, MD**, Isaac Kohane, NPJ Digit Med. 2021 Mar 30;4(1):62.

PRESENTATIONS, PANEL DISCUSSIONS

Numerous

CONTINUING EDUCATION:

More than 50 hours/year with the AAPL, review courses for Internal Medicine, etc.

SOCIETIES AND MEMBERSHIPS

- 1) American Association for Physician Leadership (formerly the American College of Physician Executives)
- 2) American Medical Informatics Association
- 3) The Health Information Management Systems Society (HIMSS)
- 4) The Cosmos Club, Washington, D.C., for international recognition of expertise in health care informatics, elected 1994

HONORS

Distinguished Fellow, American College of Physician Executives (now the American Association for Physician Leadership), 1999

McCabe Scholar – Society of the Cincinnati - 1974

Elected to Phi Beta Kappa at the University of Virginia, Charlottesville, VA, 1973, as a third-year student.

The Raven Society, the University of Virginia, 1974

LANGUAGES

Native language: English

Very rusty knowledge of Spanish.

ATHLETICS

Swimming, golf, kayaking and snow skiing.

HOBBIES

Reading, automobile racing.

REFERENCES:

Available on request.

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