

Christopher Ryan

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Education

- 2014–2019 **MSc Public Health**, *London School of Hygiene and Tropical Medicine / University of London*, London, UK.
- 2007–2012 **MS Statistics**, *Texas A & M University*, College Station, TX.
- 1987–1990 **Residency in Family Medicine**, *USAF Medical Center Scott*, Scott AFB, IL.
- 1983–1987 **MD *summa cum laude* Medicine**, *SUNY Upstate Medical University*, Syracuse, NY.
- 1979–1983 **BA *magna cum laude* Biology**, *University of Rochester*, Rochester, NY.

Experience

- 2019–present **Bioethics small group tutor**, *SUNY Upstate Medical University Clinical Campus*, Binghamton, NY.
Met approximately every six weeks throughout their third year with a group of 6-7 medical students. Facilitated discussions of ethical principles, and how they can be applied empathetically to better understand issues and dilemmas that arise in the care of patients, families, and communities.
- 2009–present **Medical Director**, *Broome County Health Department*, Binghamton, NY.
Provide medical oversight of policies, procedures, and quality assurance activities. Conduct and present statistical and epidemiological analyses. Serve as liaison to the local medical community and hospitals. Provide a public health interface with the regional EMS system.
- Designed and executed analyses for epidemiological surveillance, particularly in reference to COVID-19, opioid and methamphetamine overdoses, suicides, mental health emergencies, and EMS responses to hospice patients
 - Created several REDCap databases, including a laboratory information management system for a mobile community COVID-19 testing facility based on a retrofitted transit bus, and platforms for sharing case and contact information with our hospital and state health department partners
 - Trained and oversaw a large cadre of case investigators during the COVID-19 epidemic
 - Provided medical command and control for two evacuation shelters, with 2500 evacuees, during the historic flood of 2011
 - provided medical oversight and database/software consultation for a joint federal/state/local exercise to test the utility of Medicare billing data in reaching citizens with special medical needs during a disaster
 - Served as clinical director for an Opioid Overdose Prevention Program that deployed intranasal naloxone with law enforcement officers and trained them in its use
 - Served as laboratory director

- 2009–present **Population–Based Medicine Program Director**, *SUNY Upstate Medical University Clinical Campus*, Binghamton, NY.
Designed and implemented a curriculum in the principles of public health and emergency management for third-year medical students.
- Developed a participatory exercise in which students from a variety of disciplines (medicine, nursing, pharmacy, geography, and paramedicine), playing the roles of municipal employees, must recognize and manage a public health emergency in a fictional city, using Incident Command System concepts
 - Taught medical students some basic concepts of public health, emphasizing the effects of governmental, political, and economic policies on health outcomes
- 2012–2014 **Family Medicine Clerkship Director**, *SUNY Upstate Medical University*, Binghamton and Syracuse, NY.
Responsible for a third-year family medicine clerkship for 160 students and 75 faculty preceptors annually, across two campuses and a rural track. Designed curriculum, syllabus, and methods of student evaluation.
- 2000–2012 **Family Medicine Program Director**, *SUNY Upstate Medical University Clinical Campus*, Binghamton, NY.
Responsible for a full-year longitudinal family medicine clerkship involving 40 students and 45 faculty preceptors annually. Designed curriculum, syllabus, and methods of student evaluation.
- Developed an innovative method of student assessment based on observable behaviors and vector algebra
 - Taught students in lecture, small groups, and one-to-one at the bedside
 - Designed didactic learning sessions on breastfeeding, chronic headache, upper respiratory syndromes, hypertension, depression, effective interviewing, and other topics
- 1994–2016 **Faculty Physician**, *UHS Wilson Family Practice Residency*, Johnson City, NY.
- Outpatient and inpatient teaching of family medicine residents
 - Taught research design, evidence-based medicine, and critical appraisal of the medical literature
 - Coordinated pediatrics, otolaryngology, ophthalmology, urology, and allergy curricula
 - Served on hospital Pharmacy and Therapeutics Committee
- 1990–1994 **Family Physician and Chief of Primary Care (1991–1994)**, *416th Medical Group Hospital*, Griffiss AFB, NY.
Responsible for 5 family physicians and 5 physician assistants caring for 35,000 active duty personnel, dependents, and retirees, in a practice that saw 32,000 patient visits per year
- Served as medical director of Crash-Fire-Rescue Emergency Medical Services education program
 - Served as advanced Cardiac Life Support director for the base hospital
 - Served as consultant physician to the Mental Health Clinic

Academic appointments

- Clinical Associate Professor of Family Medicine, SUNY Upstate Medical University, Syracuse, NY
- Research Professor, Department of Geography, Binghamton University, Binghamton, NY

Computer skills

Statistical, data management, quantitative and qualitative research software

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| proficient | R, REDCap, Stata, EpiData, The Ethnograph, EZ-Text, QDAMiner |
| intermediate | SAS, AnSWR |
| beginning | Octave, gnuplot, Maple, Maxima, HyperResearch, MaxQDA |
| | Text processing and typesetting |

proficient	LaTeX, BibTeX, Sweave
	Programming languages
beginning	Perl
	Operating systems
proficient	Linux, Windows

Selected continuing education and other training

June 2017	TB Intensive Workshop, Rutgers Biomedical and Health Sciences, Worcester, MA
March 2017	Radiation Emergency Medicine course, presented by the Radiation Emergency Assistance Center/Training Site (REAC/TS), Oak Ridge Institute for Science and Education (ORISE), Oak Ridge, TN
November 2014	Logistic Regression Short Course, American Statistical Association, Rochester, NY
November 2014	ICS-300: Intermediate ICS for Expanding Incidents, Ithaca, NY
July 2014	Hospital Management of Chemical, Biological, Radiological, Nuclear, and Explosive Incidents, US Army Institute of Chemical Defense, Aberdeen Proving Ground, MD
February 2014	Field Management of Chemical and Biological Casualties, US Army Institute of Chemical Defense, Aberdeen Proving Ground, MD
December 2013	Spatial Analysis Techniques in R. Statistics.com
November 2013	Spatial Statistics with Geographic Information Systems. Statistics.com
September 2013	Mass Antibiotic Dispensing Workshop. Office of Strategic National Stockpile, Office of Emergency Preparedness and Response, Centers for Disease Control and Prevention
July 2013	Health Emergencies in Large Populations (HELP) course. Johns Hopkins Bloomberg School of Public Health, Baltimore, MD
June 2013	Summer Institute in Epidemiology and Biostatistics. Johns Hopkins Bloomberg School of Public Health, Baltimore, MD
2012	Geography 483, Problem-Solving with GIS, Department of Geography, Pennsylvania State University, University Park, PA
2012	Geography 482, The Nature of Geographic Information, Department of Geography, Pennsylvania State University, University Park, PA
2012	Geography 360, Introduction to GIS and Cartography, Binghamton University, Binghamton, NY

Awards

2021–2022	Public Health Works! Honor Roll, presented by New York State Department of Health
2017	Public Health Works! Honor Roll, presented by New York State Department of Health

- 2007 Glenn W. Tymeson Memorial Teaching Award, presented by United Health Services family practice residents
- 2005 Faculty Marshall for Commencement, at the invitation of the SUNY Upstate Medical University Binghamton Clinical Campus Class of 2005
- 1999 Glenn W. Tymeson Memorial Teaching Award, presented by United Health Services family practice residents
- 1996 The President's Award for Voluntary Faculty Service, SUNY Health Science Center, Syracuse
- 1995 Glenn W. Tymeson Memorial Teaching Award, presented by United Health Services family practice residents
- 1994 First place award for faculty clinical investigation, Uniformed Services Academy of Family Physicians Annual Scientific Assembly
- 1987 Alpha Omega Alpha national medical honor society
- 1983 Phi Beta Kappa national honor society

--- Selected presentations

- 2022 Decreased respiratory-related absenteeism among preschool students after installation of upper room germicidal ultraviolet light: analysis of newly discovered historical data. Northeast Regional Epidemiology Conference
- 2022 Bi-directional communication with REDCap Using R and the API. REDCap Public Health Working Group meeting
- 2021 Assessment of the effectiveness of a mobile COVID-19 testing facility: Broome County's "Lab Bus." Upstat 2021: the annual meeting of the upstate New York chapters of the American Statistical Association
- 2021 REDCap to support the "Lab Bus:" A mobile community COVID-19 testing facility. REDCap Public Health Working Group meeting
- 2020 A case of pre-XDR tuberculosis in a medium-sized health department. Rutgers Global Tuberculosis Institute Grand Rounds, Rutgers University / New Jersey Medical School, Newark, NJ
- 2019 A case of pre-XDR tuberculosis in a medium-sized health department. New York State Department of Health TB Update, Poughkeepsie, NY
- 2018 An inhomogeneous Poisson model of the spatial intensity of opioid overdoses, as represented by EMS naloxone use. Council of State and Territorial Epidemiologists annual conference, West Palm Beach, FL
- 2016 Spatial distribution of opioid overdoses, as represented by EMS use of naloxone. Council of State and Territorial Epidemiologists annual conference, Boise, ID
- 2016 Spatial distribution of opioid overdoses, as represented by EMS use of naloxone. Northeast Epidemiology Conference, Saratoga Springs, NY
- 2016 Public health response to an imported case of canine melioidosis. Northeast Epidemiology Conference, Saratoga Springs, NY
- 2016 Spatial distribution of opioid overdoses, as represented by EMS use of naloxone. Binghamton Biomedical Research Conference, Binghamton University, Binghamton, NY
- 2016 Spatial distribution of opioid overdoses, as represented by EMS use of naloxone. Department of Geography Colloquium, Binghamton University, Binghamton, NY

- 2014 Introducing R to high school students. Up-stat 2014: The Third Annual Joint Mini Conference of the Upstate Chapters of the American Statistical Association, Geneseo, NY
- 2014 Optimizing screening for childhood lead poisoning in Broome County. Wilson Memorial Regional Medical Center, Johnson City, NY
- 2014 Optimizing screening for childhood lead poisoning in Broome County. Lourdes Hospital, Binghamton, NY
- 2014 Medical sheltering during a flood evacuation. Central New York MPH Program Public Health Grand Rounds, Syracuse, NY
- 2012 Medical sheltering during a flood evacuation. Monroe County, NY, Department of Public Health, Rochester, NY
- 2012 Lyme Disease. Broome County Medical Society. Binghamton, NY
- 2011 Influenza. New York Chapter of the American College of Physicians. Binghamton, NY
- 2011 The Geometry of Student Evaluation. Northeast Regional Society of Teachers of Family Medicine, Danvers, MA
- 2003 A Medical Eye Clinic Within a Family Medicine Residency Practice. Northeast Regional Society of Teachers of Family Medicine annual conference, Pittsburgh, PA
- 2003 Feedback: Lessons from Spaceflight. Annual Teaching Day for Teachers, SUNY Upstate Medical University, Syracuse, NY
- 2001 Nicenet: a Free, On-line Learning Tool that Works. First Annual Teaching Day for Teachers, SUNY Upstate Medical University, Syracuse, NY
- 2001 Hippogriffs and Subarus: Teaching Effective Interviewing. First Annual Teaching Day for Teachers, SUNY Upstate Medical University, Syracuse, NY
- 2001 Migraine Management for Cheapskates. A.O. Fox Hospital Grand Rounds, Oneonta, NY
- 1999 Evaluation of Fatigue in Primary Care. Guthrie Family Practice Residency, Sayre, PA
- 1997–2000 Oral Rehydration Therapy in Children with Diarrhea. Presented annually at United Health Services Pediatric Grand Rounds
- 1994 Alcohol and Minor Trauma. Uniformed Services Academy of Family Physicians 19th Annual Scientific Assembly
- 1990 A Case of Quinidine–Induced Lupus. Uniformed Services Academy of Family Physicians Annual Scientific Assembly

Professional affiliations and certifications

- American Statistical Association Accredited Professional Statistician (PStat®)
- Certified in Public Health by the National Board of Public Health Examiners
- Diplomate of the National Board of Medical Examiners
- Diplomate of the American Board of Family Medicine
- American Public Health Association
- Council of State and Territorial Epidemiologists
 - Overdose Subcommittee
- TeX Users Group
- REDCap Public Health Working Group

Community Service

2004–2020 Board of Trustees, George F. Johnson Memorial Library, Endicott, NY
approx Regional Emergency Medical Advisory Committee, Susquehanna EMS Region
2011–present
approx Susquehanna Regional Emergency Medical Services Council
2016–present

Publications

CW Ryan. Evaluation of patients with chronic headache. *Am Fam Physician*, 54(3):1051–1057, Sep 1996.

CW Ryan. Alcohol and minor trauma. *Mil Med*, 162(4):292–295, Apr 1997.

K Williams, J Galas, D Light, H Carnevalla, C Ryan, R Isaacson, R Burrigh, and P Donovick. Head injury and alexithymia in primary care, 1998. Poster presented at the Society for Neuroscience annual meeting, Los Angeles, CA, 7-12 November 1998.

CW Ryan. Association between administrative and ownership characteristics of hospices and their proportion of inpatient deaths. *Hosp J*, 15(3):63–74, 2000.

CW Ryan and E Bean. Management of upper respiratory syndromes in children. *Family Practice Recertification*, 22(4):41–55, 2000.

K Williams, J Galas, D Light, H Carnevalla, C Ryan, R Isaacson, R Burrigh, and P Donovick. Head injury and alexithymia in primary care. *Brain Injury*, 15(4):349–356, 2001.

CW Ryan. Headache. In RE Rakel and ET Bope, editors, *Conn's Current Therapy*, pages 1045–1053. Elsevier-Health Sciences Division, 57th edition, 2005.

CW Ryan. Association between colonic symptoms and inattention/hyperactivity in british children. *Child and Adolescent Mental Health*, 13(4):188–192, 2008.

CW Ryan. Spatial point pattern analysis of prehospital naloxone administrations. *BioRxiv*, 2017. <https://www.biorxiv.org/content/early/2017/01/16/100412>.

CW Ryan, K Bishop, DD Blaney, SJ Britton, F Cantone, C Egan, MG Elrod, CW Frye, AM Maxted, and G Perkins. Public health response to an imported case of canine melioidosis. *Zoonoses and public health*, 65:420–424, June 2018.

CW Ryan. An inhomogeneous poisson model of the spatial intensity of opioid overdoses, as represented by EMS naloxone use. *BioRxiv*, 2019. <https://www.biorxiv.org/content/10.1101/529206v1>.

Christopher W. Ryan. Assessment of the effectiveness of required weekly covid-19 surveillance antigen testing at a university. *MedRxiv*, 2023. <https://www.medrxiv.org/content/10.1101/2023.11.22.23298917v1>.

CW Ryan. Decreased respiratory-related absenteeism among preschool students after installation of upper room germicidal ultraviolet light: analysis of newly discovered historical data. *International Journal of Environmental and Public Health Research*, 2023. <https://www.mdpi.com/1660-4601/20/3/2536/htm>.