The Coalition Chronicle

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Spotlight Article University of North Carolina at Charlotte



College of Health and Human Services Department of Applied Physiology, Health, and Clinical Sciences **Respiratory Therapy Programs** By Kimberly Clark, EdD, RRT, RRT-NPS, FAARC Clinical Associate Professor BSRT and MSRC Program Director

Overview

The University of North Carolina (UNC) at Charlotte is North Carolina's urban research university serving nearly 30,000 students in one of the fastest growing cities in the U.S. UNC Charlotte was founded in 1946 as a provisional higher education center to meet the public demand for higher education following World War II. As demand decreased, the state started closing the higher education centers. However, the education and business leaders saw the continuing need for higher education in the Charlotte community and responded. In 1949, the center transitioned to Charlotte College and began offering the first two years of college courses. In 1964, Charlotte College became a four-year, state-supported college and subsequently transitioned to UNC Charlotte, the fourth campus to become part of the UNC System. From its humble beginnings as a college center for post-war veterans, UNC Charlotte is the fastest growing and third largest university in North Carolina.

The Bachelor of Science in Respiratory Therapy (BSRT) program at UNC Charlotte started in 2007, but the idea for its development started many years earlier. The North Carolina Association for Respiratory Care Educators (NCARE) drafted a plan for a BSRT program and kindly handed it over to the university willing to take it on. Although NCARE was made up of respiratory therapy associate degree faculty members teaching in the North Carolina Community College System, they saw the value of having BSRT programs in the state and supported those efforts without hesitation.

Curriculum

As a result of the BSRT program success, the Master of Science in Respiratory Care (MSRC) degree advancement program was added in 2017. In addition, the BSRT and MSRC programs were among the first degree advancement programs to receive CoARC provisional accreditation in 2017. In 2021, two graduate certificates in respiratory care leadership and clinical concepts were added. Courses successfully completed as part of the graduate certificates are fully transferrable to the MSRC program.

To enhance opportunities for students to continue their respiratory therapy education, the early-entry MSRC program was established to allow currently enrolled senior-level BSRT students to start the MSRC program. Courses taken in the MSRC program dual count toward the BSRT requirements and tuition is charged at the undergraduate rate until completion of the BSRT program. The early-entry MSRC program allows students the opportunity to complete both degrees in as little as three years with part-time enrollment.

The programs continue to evolve and have undergone many revisions over the years. The most recent revision initiatives planned for fall 2023 will serve to streamline the curricula, facilitate more flexible course offerings, and shorten time to completion. For the BSRT program, students will receive up to 64 credit hours from their associate degree in respiratory therapy and 26 credit hours for the NBRC RRT credential. Students will complete 30 credit hours of required

respiratory therapy courses. The courses will be offered using an 8-week format with three enrollment cycles each year. The MSRC program is already approved at 30 credit hours and will also be offered using an 8-week format with two enrollment cycles each year. One-year accelerated options will be available for students who want to enroll in courses on a full-time basis. The respiratory therapy programs are offered 100% online with no on-campus requirements.

BSRT Program of Study (30 credit hours)

Core (Required courses):

RESP 3101: Leadership Practices & Professional Writing for Respiratory Therapists (3)

RESP 3102: Extended Services in Respiratory Therapy (3)

RESP 3205: Cardiopulmonary Pharmacotherapy (3)

RESP 3206: Critical Care Monitoring and Mechanical Ventilation (3)

RESP 4107: Teaching Fundamentals and Clinical Education (3)

RESP 4108: Health Outcomes and Quality Assessment: A Management Perspective (3)

RESP 4103: Evidence-Based Practice in Respiratory Care (3)

RESP 4208: Critical Care Pathophysiological Concepts for Respiratory Therapy (3)

Electives (Choose 2 courses from the following):

RESP 3108: Introduction to Research Methods in Respiratory Care (3)

RESP 4205: Information Technology in Respiratory Care (3) or RESP 4206: Health Communications: Ethical and Legal Implications (3)

RESP 4410: Respiratory Therapy Practicum (3)

MSRC Program of Study (30 credit hours)

RESP 5101 Health Outcomes and Quality Assessment (3) RESP 6101 Respiratory Care Leadership (3) RESP 6104 Health Policy, Law & Ethics in the Health Professions (3) RESP 6105 Pulmonary Function Testing & Cardiopulmonary Rehabilitation (3) RESP 6106 Mechanical Ventilation Application & Monitoring (3) RESP 6110 Cardiopulmonary Disease Management (3) RESP 6111 Patient-Centered Care in Cardiopulmonary Disease (3) RESP 6115 Research Methods for Respiratory Care (3) RESP 6601 Emerging Issues in Respiratory Care Seminar or Elective (3) or NURS 6282 Interprofessional Collaboration in Healthcare (3) RESP 6804 Respiratory Care Capstone Project (3)

Respiratory Care Leadership Graduate Certificate (12 credit hours)

RESP 5101 Health Outcomes and Quality Assessment (3) RESP 6101 Respiratory Care Leadership (3) RESP 6104 Health Policy, Law & Ethics in the Health Professions (3) RESP 6601 Emerging Issues in Respiratory Care Seminar or Elective (3) or NURS 6282 Interprofessional Collaboration in Healthcare (3)

Respiratory Care Clinical Concepts Graduate Certificate (12 credit hours)

RESP 6105 Pulmonary Function Testing & Cardiopulmonary Rehabilitation (3) RESP 6106 Mechanical Ventilation Application & Monitoring (3) RESP 6110 Cardiopulmonary Disease Management (3) RESP 6115 Research Methods for Respiratory Care (3)

Student Success

The respiratory therapy programs at UNC Charlotte exist because we want to provide respiratory therapists opportunities to achieve their professional goals. Many of our graduates advance their careers as respiratory care department managers and directors, education program directors and directors of clinical education, hospital education positions, pulmonary navigators, and continue their education at the next level. Many of our BSRT students have presented at the UNC Charlotte undergraduate research conference, with some taking home the award for best poster presentation made by students in the College of Health and Human Services. Several of our MSRC graduates have presented posters at the North Carolina Society for Respiratory Care (NCSRC) symposium and the AARC Congress' Open-Forum as well as published in scholarly journals.



The BSRT program has produced over 700 graduates since the first graduating class of three in 2008. There have been 50 MSRC graduates since the first graduating class in 2019. As a 2015 BSRT and 2020 MSRC graduate, Ms. Vickie Bell (photo) exemplifies how UNC's upper division education promoted leadership in respiratory care. She joined the respiratory therapy faculty at Wilkes Community College in 2016, was promoted to clinical coordinator in 2017, and then assumed

the role of program director in 2022.

She was recently awarded the NCSRC Gail Gane Educator of the Year Award and a was finalist for this year's Excellence in Teaching Award in the North Carolina Community College System. Vickie previously served a 2-year term as Treasurer for the NCSRC and is currently the Secretary. She is very active in her community by providing education to raise awareness on the hazards of vaping in the elementary, middle, and high schools. We are very proud of Vickie's accomplishments and look forward to her future contributions to the profession.

Faculty



Kimberly Clark, EdD, RRT, RRT-NPS, RPFT, RRT-SDS, RRT-ACCS, FAARC. Kim has over 30 years of experience as a respiratory therapy clinician, educator, and administrator. She earned a BS in respiratory therapy at Wheeling Jesuit College, an MBA at West Virginia University, an EdD in Education Leadership at UNC Charlotte, and an EdD in Kinesiology at UNC Greensboro.

She served as the inaugural BSRT program director at UNC Charlotte from 2007 to 2010 and then transitioned to the community college as an academic dean. She returned to UNC Charlotte as the inaugural program director for the MSRC program in 2017 and added the BSRT program in 2022. Dr. Clark serves as the vice president for external affairs and board of director for CoBGRTE. Additionally, she serves on several committees through the NCSRC, AARC, CHEST, National Academy for Health, and Physical Literacy (NAHPL), and the National Academies of Practice (NAP). Kim will be inducted as a NAP Distinguished Fellow and a member of the inaugural class for the new Respiratory Care Academy in April.



Sarah Hess, DEL, R.EEG.T, RPSGT, RST. Sarah is a clinical assistant professor and program coordinator for the BS in Neurodiagnostics and Sleep Science program, a joint initiative with the Department of Health Sciences in the UNC Chapel Hill School of Medicine. Prior to joining UNC Charlotte, she was the polysomnography program coordinator for 14 years at Catawba Valley Community College (CVCC).

She completed an electroneurodiagnostics program at Southwestern Community College and polysomnography training at the Northside Sleep School in Atlanta. She continued her education at Ashford University earning a BA in Organizational Management in 2011. Sarah completed the Master of Science in Strategic Leadership in 2013 and the Doctorate in Executive Leadership in 2017 from the University of Charleston in WV. Sarah joined UNC Charlotte in 2018 and brings her expertise to teach management and leadership courses in the BSRT and MSRC programs.



Christopher Mayo, DHS, RRT. Chris is a clinical assistant professor in the respiratory therapy programs. He came to us in spring of 2021 from his previous appointment as Director of Clinical Education at North Shore Community College in Danvers, MA. Chris earned his AS degree in respiratory care in 2011 and a bachelor's degree in health care administration in 2015 from St. Petersburg College. He earned a MS in respiratory care from Northeastern

University in 2018 and just finished his DHS in Educational Leadership and Administration in 2022 from Massachusetts College of Pharmacy and Health Sciences. Chris brings several years of experience in respiratory care department administration that he shares with our students as well as having a passion for simulation.



Brian Ring, MSRC, RRT, RRT-ACCS. Brian joined the respiratory therapy programs in 2019 as a clinical assistant professor. Brian's previous appointments included the position of clinical research coordinator in the Center for Environmental Medicine, Asthma, and Lung Biology at the UNC School of Medicine and as an ECMO

specialist at UNC Health Care. Brian earned his AAS degree in respiratory therapy from Central Piedmont Community College in 2015. He continued his education at UNC Charlotte and graduated from the BSRT program in 2017 and the MSRC program in 2019. He is currently in the candidacy phase of his PhD in Health Sciences program at Northern Illinois University. Brian serves on the NCSRC Board of Directors and research committee. Brian is a member of the AARC Clinical Practice Guideline team and recently served as an editorial intern for *Respiratory Care*. Brian has published research in *Respiratory Care*, *American Journal of Respiratory Critical Care Medicine*, and the *Journal of Asthma*.



Dustin Smith, MA, RRT. Dustin is the newest addition to our respiratory therapy faculty. He started in fall 2022 as a clinical assistant professor in the respiratory therapy programs. Prior to his appointment at UNC Charlotte, he served as the clinical educator for Atrium Health Levine Children's Hospital in Charlotte, NC. Dustin completed his BS in Cardiopulmonary Sciences in 2011 and an MA in Career and Technical Education

in 2018 at the University of Central Florida.

He brings extensive respiratory therapy experience in neonatal and pediatrics critical care, outpatient pulmonary function testing and special procedures, and cystic fibrosis pulmonary function testing and education for pediatric patients and their families. Dustin is savvy at creating videos to teach and demonstrate respiratory therapy concepts and equipment.

Our programs have been consistently supported by excellent adjunct faculty who have answered the call when needed:

De De Gardner, DrPH, RRT, RRT-NPS, FAARC, FCCP Amanda Nickel, MSc, RRT, RRT-NPS, RRT-ACCS Marilyn Roman, DHSc, RRT, RRT-NPS John Sherman, MHS, RRT, RRT-ACCS, RRT-NPS Daniel Williams, MAEd., RRT, RRT-NPS, RRT-ACCS Deb Willis, MHA, RRT

We receive support from our department chair, Dr. Auguste Barfield; department administrative support staff, Fran Paluso and Wendy Ramirez; and the School of Professional Studies staff, Stephannie Miles, Louise Carte, and Nkiru Obi.

Contact Information

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INTERVIEW

Jerome M. Sullivan, PhD, RRT, FAARC



President Emeritus, International Council for Respiratory Care Professor Emeritus, College of Health and Human Services University of Toledo, Ohio

By Jeff Ward, MEd, RRT, FAARC Mayo Clinic Multidisciplinary Medical Simulation Center Rochester, Minnesota

Tell us about your early days as a respiratory therapist. What initially brought you into the profession and moved you further?

First, I must express my appreciation for the opportunity to address the CoBGRTE readership. I have for many years valued the objectives and philosophy of the organization regarding respiratory care education programs. CoBGRTE'S commitment to minimum degree requirements for entrance into the profession and the growing need for advanced degree programs emphasizing research pathways for RT's are shared interests of mine and are critical to the longevity of the profession.

My career as an RT began in 1965 as a summer job-seeking high school graduate. I was hired as an OJT inhalation therapist (IT) at St. John's Hospital in Cleveland, Ohio. I enrolled at Ohio University in the Fall of that year and returned to the hospital position during breaks and summer vacations until my graduation in 1969. I then accepted a full-time IT position at the hospital and found myself as the only person in the department with a BS degree. In addition to floor therapy and ventilator care in the ICU, I was also assigned to help develop training and education programs for department personnel. That led to being promoted to clinical instructor and assistant department director. I realized that having both clinical experience and a BS degree gave me a chance to seek further opportunities. Within a year I accepted a position as program director of a new associate degree RT program at the University of Toledo.

2. Who were your mentors? -What/how did they contribute to your career?

There were two individuals, both physicians, that served as examples and role models for me in my career. My first mentor was my Medical Director of the IT department at St. John's Hospital Paul Fumich, MD. He established a unique department which was ahead of its time in the early 1960's. This was long before the respiratory care (RC) profession was fully recognized as an important contributor to better patient care in the American medical care system. Dr. Fumich knew that we provided him with an opportunity to better serve his patients. He built his own team with specialized knowledge not generally found in other members of the staff. He instilled pride in me and our department which provided respiratory care 24/7 365; it had its own blood gas and pulmonary function labs and required staff to be clinically current and to demonstrate competence. His example set a high bar as I moved forward in providing RC and educating practitioners. My second mentor was Harold R. Stevens, MD who was my RC program medical director at the University of Toledo. He was the reason I stayed at the university over many years. In short, he was an advocate for the profession. In the mid 1970's and 1980's he built a comprehensive RC department with over 200 RRT's on staff. He was an example as a teacher and a clinician and made a lasting impression on myself and many other practitioners and educators. He continued his service to the profession by serving on the NBRC. Again, he recognized that individuals specially educated in RC could provide a much more comprehensive approach to treating pulmonary patients. He understood that to provide this specialized education to RRT's, additional courses and time would be required. This is why he supported our faculty and students every step of the way in moving from an associate Degree to the baccalaureate level.

3. Could you comment on your *path* in advancing your own education? How did it contribute to your career and in many roles as a leader in the AARC and other professional organizations?

As I worked in and observed the structure of the university system, I became convinced that for our RC educational programs to survive and thrive we needed to move to more advanced degree options. Whether we adopted a 2+2 model or moved directly to a BS program, it was necessary to move forward. I had the opportunity to serve as the Co-Chair of an AARC- sponsored Consensus Conference in Washington DC on education programming which called for our profession to move toward bachelor's degree programming. With this supporting evidence in less than 1 year we were able to move our own program to the BS level. At the same time, I recognized that in order for me to advance within the university system I would need to pursue my own higher degree level. I worked on my MS degree and completed my thesis on the role of immunoglobulin E (IgE) in the inflammatory process. This not only helped me clinically but also in my career advancement. The additional degree was part of my portfolio when I was promoted to department chair of the allied health programs. Likewise, over the next few years I pursued and received my PhD in higher education administration. This played a significant positive role when I was appointed Dean of the College of Health and Human Services at the University of Toledo.

4. What are some key lessons you learned as a clinician, and active participant in professional organizations?

As a clinician my key principle is to be up to date on the best practice regarding the procedure, equipment and medication that you employ. We must continue to ask ourselves, "does the clinical intervention work?" and "is there data to support continued use?" There were some modalities that we used in the past for which the answers were clearly---no. With each modality we need to ask, "what is the ultimate goal and do we help the patient"?

About active participation in professional organizations – this is a must. Supporting organizations such as the AARC is how a group of individuals, with similar interests, can move forward and bring their ideas and the ideas of others and shared objectives to the public forum. This is a mechanism by which individuals can compare their thoughts and hopefully make decisions designed to reach shared goals. Involvement in professional organizations, in most instances, is favorably reviewed by places of employment and may apply to advancement on "career ladders" as well as enhancing professional resumes.

5. What would you recommend to new graduate therapists just beginning their career?

Make sure you have taken advantage to expose yourself to as much formal RC education as you are able. If it is in your interest and your professional position allows, please get involved in RC research. You should be aware that in 1990, I established the Jerome M. Sullivan endowed research fund in the American Care Foundation (ARCF) for RC practitioners who serve as the principal Respiratory investigator (PI) on a research project.

Get involved in your local, state and national RC organizations, accept committee assignments and be willing to run for office. Support and contribute to the RC Journal which has published continuously since 1956.

BOOK REVIEW

UNCONTROLLED SPREAD Why COVID-19 Crushed Us and How We Can Defeat the Next Pandemic

Scott Gottlieb, MD Former FDA Commissioner

By Thomas A Barnes, EdD, RRT, FAARC Professor Emeritus of Cardiopulmonary Sciences Northeastern University, Boston, Massachusetts

This book by Dr. Scott Gottlieb should be read and kept as a reference by respiratory therapists (RTs) who have worked on the frontlines of the COVID-19 pandemic and by RT educators who have taught students during the pandemic. RT professionals need to prepare for the next pandemic. The first step in preparation will be to review what was done well during the COVID-19 pandemic and then consider what can be improved. Below are some notable items from each of the 18 chapters in the book presented as an overview. This review is a limited look at what is included in each chapter. The book has a wealth of detailed information authored by a globally respected public health professional who provides a first-hand insider look based on his experiences during the pandemic. Gottlieb critically shares what he has learned and how the USA and other countries need to prepare for the next pandemic.

Chapter Overviews

Chapter 1 America the Vulnerable: Discusses how susceptible America was to pandemics. Gottlieb describes how the United States travel ban was announced on February 2, 2020 denying entry to foreign nationals who had visited China 14 days prior to their arrival. Also discussed was how the World Health Organization (WHO) endorsed China's lockdown of Hubei province (where Wuhan is located). However, shortly after this endorsement WHO was critical of the restrictions imposed by the United States.

Chapter 2 Confusion and Subterfuge: Covers the misunderstandings at the beginning of the COVID pandemic. Gottlieb describes a modeling study by researchers at the University of California, San Diego and at the University of Arizona that found the first cases of COVID probably began spreading in November 2019 in Hubei province.

Chapter 3 Pandemics as National Security Threats: Makes a case for United States intelligence agencies becoming involved in tracking information on potential pandemic outbreaks in other countries.

Chapter 4 The Outbreak We Didn't Want to See: Gottlieb describes what happened with COVID when "The federal government lost trust and credibility early, by its inability to accurately convey the true scope of the hazard. He speaks to the importance of making the case for our actions, and galvanizing support for them.

Chapter 5 Looking for Spread in the Wrong Places: Gottlieb points out prominent respiratory symptoms were not seen in 90% of patients diagnosed with COVID, only 2% became critically ill. He discusses how public health officials could be confused if they were looking for unusual spikes in respiratory symptoms at a time when flu diagnosis begins to drop at the same time of COVID's arrival. Gottlieb discusses why the syndromic surveillance wasn't effective with an intense and late flu season. He states "The Public Health people on the White House Task Force were saving in early 2020 that there was no spread of COVID because they didn't see it in the influenza-like illness (ILI) network ("Information on outpatient visits to health care providers for respiratory illness referred to as (ILI) is collected through the U.S. Outpatient Influenza-like Illness Surveillance Network (ILINet). ILINet consists of outpatient healthcare providers in all 50 states, Puerto Rico, the District of Columbia, and the U.S. Virgin Islands"). The CDC publishes weekly data from public health laboratories for the total number of specimens tested and the number positive by influenza virus type and subtype/lineage. Approximately 85 million patient visits were reported during the 2020-21 season. Each week, more than 3,000 outpatient health care providers around the country report to CDC the number of patient visits for ILI by age group (0-4 years, 5-24 years, 25-49 years, 50-64 years, and \geq 65 years) and the total number of visits for any reason. A subset of providers also reports total visits by age group. For this system, ILI is defined as fever (temperature of 100°F [37.8°C] or greater) and a cough and/or a sore throat.

Chapter 6 The Zika Misadventure: Covers the role of the CDC and FDA in developing/approving a test for SARS-CoV-2. Gottlieb explains why from January 18 to March 7, 2020 the CDC tested only 3,869 specimens for the virus. He claims, "during this critical stretch of time the country was left largely blind to the spread."

Chapter 7 The CDC Fails: Critically explains why "the problems with the CDCs COVID test seem to have started inside the agency's Respiratory Virology lab in Atlanta.

Chapter 8 Not Enough Tests and Not Enough Labs: Gottlieb discusses the technologies to test for SARS-CoV-2 and explains the difference in antigenbased tests and molecular tests. He claims that "Some government entity or official should have been charged with advancing these different testing options in a coordinated fashion."

Chapter 9 Shortage after Shortage: Covers problems related to getting enough COVID test kits, especially equipped sites, and trained personnel to collect the samples. Sputum needed to be collected and the nation's installed base of blood specimen sites couldn't be used. Failures in the supply chain included simple items like having enough swabs to obtain a biological sample from a patient's nose. Gottlieb provides a detailed discussion of the supply chain problems, how they were overcome and what steps need to be taken to prevent a similar recurrence. He explains that for one 90 day run in the spring of 2020, about 140 million N-95 masks were used. Respiratory therapists on the front lines can attest to the shortages especially the impact of not having enough mechanical ventilators to care for the most severely ill COVID patients. Gottlieb raises in this chapter the critically important question of "How to maintain excess capacity once the pandemic is over." Should a strategic supply of manual and mechanical ventilators be stored in warehouses or in the hospitals where they would be used and maintained?

Chapter 10 Preparing for the Wrong Pathogen: Starts with a short list of "great understatements in history:"

Napoleon's retreat from Moscow – "just a little stroll gone bad" Pompeii – "a bit of a dust storm" Hiroshima – "a bad summer heat wave" and Wuhan – " just a bad flu season."

In this chapter a relatively detailed history of past infectious disease is covered with evidence of how concerned experienced experts were with likeness to other pandemics. Dr. Carter Melker: "The projected size of the outbreak already seems hard to believe, but when I think of the actions being taken in China that are reminiscent of 1918 Philadelphia, perhaps the numbers are correct. More transmissible than pandemic flu and more deadly than seasonal flu."

Chapter 11 Stay-at-Home Orders: Discusses the idea and history of using nonpharmaceutical interventions (NPIs) dating back to the so-called Spanish flu epidemic in 1918. IDIs were considered a critical holding plan by public health experts while a vaccine to protect against COVID was developed, tested, and distributed. The chapter discusses the initial and later resistance to keeping children and older students from attending public K-12 classes as well as college

courses. Also, considered was the shut-down of nonessential businesses. A plan to slow the spread was sought with guidance from Drs. Carter Mecher and Richard Hatchett. At the time Hatchett was serving as a White House biodefense policy advisor. Mecher was recruited because of his experience in healthcare delivery and his knowledge of hospital systems. One of the strengths of Gottlieb's book is his sharing of inside knowledge of how the COVID pandemic was managed by the White House, Centers for Disease Control and Prevention (CDC), U.S. Food and Drug Administration (FDA), and U.S. Department of Health and Human Services (HHS). Both FDA and CDC are operational divisions of HHS.

Chapter 12 A Plan Gone Awry: In this chapter Gottlieb describes meetings on March 13, 2020 at the White House with senior staff to convince the president that the United States needed to adopt some form of mitigation to slow the spread of COVID. Gottlieb made a case for some steps that could be taken to slow the spread of coronavirus. He was greatly concerned that the healthcare system could be "overwhelmed." Gottlieb believed "the problem was that without a diagnostic test, health officials had no way of knowing how widely the virus was spreading." The chapter covers in detail important differences between COVID and flu, and addresses which mitigation efforts succeeded and those that failed.

Chapter 13 The Information Desert: Gottlieb takes issue with whether the CDC could provide "timelier and more actionable reporting. The issue is discussed with specific cases where improvements need to be made. Included are issue such as "how the CDC reported COVID hospitalizations and many more issues of interest to respiratory therapists who were on the front lines and educators teaching RT courses during the pandemic are covered.

Chapter 14 Hardened Sites: South Korea and Puerto Rico are used as a case study to show how other countries and states handled the COVID pandemic. The COVID experience in Italy was also discussed using an example where the Italian town of Vo, local officials, in the hard hit Lombardy region, were able to contain spread using extensive testing, with isolation and quarantine for those infected or exposed to the virus. The reasons why the United States never was able during the pandemic to keep up with initial spread is explained and compared to South Korea.

Chapter 15 Evidence is Hard to Collect in a Crisis: Chapter 15 begins with a discussion of America's first known cases of a novel coronavirus known as Middle East Respiratory Syndrome (MERS). One of the patients was admitted to a community hospital in Indiana and during the course of his treatment 53 healthcare workers were in contact before a diagnosis was made. Gottlieb estimated that probably hundreds of others were exposed to the virus during the patient's journey from Saudi Arabia. The author uses actual cases to illustrate the points he makes throughout the book. He also provides numbered notes that are

linked to the text in book chapters to support statements made with published resources. Gottlieb strongly suggests that "sustained investment in broad capabilities that could counter similar dangers – not specific counter measures but general approaches to designing and developing drugs and vaccines that could be deployed against an array of adjacent risks was needed." The use of hydroxychloroquine to treat COVID is used to illustrate the risk of allowing critical scientific questions to go unanswered.

Chapter 16 Getting Drugs to Patients: This chapter discusses how two biotech companies discovered, developed, and commercialized COVID antibody drugs. The companies did the work on the drugs long before it was approved by the FDA and before the full extent of the COVID pandemic was known. Gottlieb describes his efforts to move the national Warp Speed focuses from finding and making vaccines to the development of COVID antibody drugs.

Chapter 17 The mRNA Breakthrough: Describes how COVID came at the moment when science permitted the production of fully synthetic vaccines. This was possible because of data on the genetic sequence of the virus did not require samples of the pathogen. The concept of acquiring immunity to COVID through vaccination to developing an antibody-based protection is covered in this chapter. Gottlieb covers why making vaccines using just key protein subunits is better than growing chosen virus strains that need to be incubated and grown in chicken eggs. This chapter discusses how using messenger RNA (mRNA) vaccines during the COVID pandemic was a historical turning point.

Chapter 18 A New Doctrine for National Safety: A case is made for integrating national security agencies into public health efforts. Gottlieb explains why bolstering our pandemic response preparedness must make sure a catastrophe on the scale of COVID can never happen again. The chapter describes the importance of expanding the quality RNA sequence data on a massive scale to evaluate the evolution of virus pathogenicity and for tracing its spread.

Publication Information

Gottlieb S. <u>UNCONTROLLED SPREAD Why COVID-19 Crushed Us and How We Can</u> <u>Defeat the Next Pandemic</u>. September 21, 2022, HarperCollins, New York, NY, Inc. 512 pages.

Scott Gottlieb, MD

"Served as the twenty-third commissioner of the US Food and Drug Administration. He is a resident fellow of the <u>American Enterprise Institute</u>. Dr. Gottlieb serves on the board of directors of the pharmaceutical company Pfizer, Inc. and the genomic sequencing company Illumina, Inc." (From *About the Author page 495.*)

International Spotlight

Jithin K Sreedharan BScRT, MScRT, FISQua, FIARC, PhD



Superintendent-Clinical & Laboratory Education Affairs Lecturer-Respiratory Care Department Program Quality Lead, National Council for Academic Accreditation and Assessment Prince Sultan Military College of Health Sciences King Fahad Military Medical Complex Ministry of Defense and Aviation Dhahran, Kingdom of Saudi Arabia

By Wendy Castro, MS, RRT, RRT-NPS

Chair, CoBGRTE International Outreach Committee

1. Describe a typical day practicing as an RT in your country.

Respiratory therapists (RTs) are highly qualified, indispensable members of a multidisciplinary medical team who use their expertise to support patients during emergencies, operations and perhaps other procedures, devise treatment plans, as well as provide guidance on outpatient care. In the past decade, it has become evident that the presence and greater input of RTs leads to better outcomes and more efficient use of resources. Intermediate care units and ICUs operate as functional units each has a competent on-site team and their own management under the supervision of a full-time intensivist directly responsible for patient care. To keep the service running, on-site RTs must provide coverage 24 hours a day.

The front-line healthcare workers and leaders look up to us as role models who respect everyone for who they are and who supports the patients and their families. We are unique, in embracing the potential of information and communication technologies to provide individuals with the finest knowledge currently accessible while honoring their exclusive values and preferences. We learn in schools to be always polite while speaking to others, give individuals space to express themselves, and pay close attention to what they are saying. Our team allows people to actively participate in all decisions relating to their health and medical treatment. RTs are proactive advocates for their patients, mentors for other health professionals, and ready to learn from others, regardless of their age, role, or status. We uniquely perform duties in:

- Emergency, Trauma, Surgical and Critical Care Departments
- Outpatient departments, wards, and advanced monitoring suites
- Pulmonary Diagnostics, and Rehabilitation Centers
- Home care, and long-term care centers
- Research, and Quality Improvement
- Academics, Policy Development and in Administrative Capacities
- Clinical Simulation, Artificial Intelligence, R&D and Application Specialists
- Air and Surface Transport

2. What drew you to respiratory care?

In a nutshell, joining the graduate program in RT was completely unexpected. Even though we all strive to accomplish certain objectives in life, we are all aware that the journey itself is what we value the most. The experiences you will have during your medical education, before becoming an RT or clinician, and the clinical challenges you'll face as a medical practitioner, after becoming a healthcare provider, will shape your life in a positive way. Becoming a healthcare professional is a kind of destination and achievement for you. That is the lesson I took away from my entire career. I hoped that my destiny would lead me to become an RT and, ultimately, a good person. The field of respiratory care is fascinating too. The experiences are between being able to comprehend the human body and knowing how to get it back on track are the ones you will remember for the rest of your life. Every time you heal a patient, both the patient and you will be grateful that you are an RT. Such a deep understanding ignited the fire in me to pursue higher degrees.

3. What obstacles did you have to overcome to obtain your degree and practice in your country?

I began my RT career in 2004, when I enrolled in my graduate program, not many had even heard of it. The situation wasn't much different later when I enrolled in my postgraduate program (Master of Science in Respiratory Care) and for my doctoral degree in respiratory care. I had a lot of trouble adjusting to the new learning environment and methods. None of the courses or study structures were as easy to understand or regulated as they should have been. Furthermore, a lack of appropriate direction, financial strain, workload, and work conflict were all common. But I was certain that my investment would eventually pay off. My family, friends, and mentors helped me overcome my challenges and they were my source of strength. My message to the younger generation is to keep this in mind whenever you feel overwhelmed by expenses, conflicts and tempted to quit. Finally, the graduate level students I managed while I was pursuing my higher degrees were a driving force for me to reach greater heights academically. There was only one thing on my mind: future respiratory therapists shouldn't have to go through the same challenges I had.

4. What formal education did you have?

Bachelor of Science in Respiratory Care (BSc) - 4 Years Master of Science in Respiratory Care (MSc) - 2 Years Doctoral Degree in Respiratory Care (PhD) – 4 Years

5. What professional associations are you a member of?

Indian Association of Respiratory Care (IARC) American Association of Respiratory Care (AARC) International Council for Respiratory Care (ICRC) Saudi Society for Respiratory Care (SSRC) International Society for Quality in Health Care (ISQua)

Professional Positions Posted

*Georgia State University, *University of Nebraska Medical Center, *Massachusetts College of Pharmacy and Health Sciences, *Thomas Jefferson University, *Rowan University, *University of North Carolina-Charlotte, *Stony Brook University, *University of Missouri, *Liberty University, *St. Catherine University, *University of North Carolina-Wilmington, *Augusta University, *Upstate Medical University-Syracuse, *Norton Healthcare, *University of Virginia Health System

ASRT to BSRT & MSRC Degree Advancement Programs BSRT and MSRT Entry Programs

Graduate Respiratory Therapist Programs

www.CoBGRTE.org

CoBGRTE Membership Committee Drawing

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Drawing will be held May 1, 2023



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CoBGRTE Institutional Members - Continued

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Cobgrte

If you have not already decided to become a CoBGRTE member after visiting <u>www.cobgrte.org</u>, the following are 15 reasons why you should join the coalition.

Reasons Why You Should Become a CoBGRTE Member

- 1. Award scholarships to baccalaureate and graduate respiratory therapy students.
- 2. Assist in the development of ASRT to BSRT Bridge Programs.
- 3. Collectively work towards the day when all respiratory therapists enter the profession with a baccalaureate or graduate degree in respiratory care.
- 4. Support a national association, representing the 70 colleges/universities awarding baccalaureate and graduate degrees in respiratory care, to move forward the recommendations of the third 2015 conference.
- 5. Help start new baccalaureate and graduate RT programs thus leading to a higher quality of respiratory therapist entering the workforce.
- 6. Work to change the image of the RT profession from technical-vocationalassociate degree education to professional education at the baccalaureate and graduate degree level.
- 7. Mentoring program for new graduates as well as new faculty members.
- 8. Join colleagues to collectively develop standards for baccalaureate and graduate respiratory therapist education.
- 9. Develop public relations programs to make potential students aware of baccalaureate and graduate respiratory therapist programs.
- 10. Help to publicize, among department directors/managers, the differences between respiratory therapists with associate, baccalaureate, and graduate degrees.
- 11. Access to over 75 Spotlight articles on BSRT and RT graduate programs, and major medical centers.
- 12. Round table discussion dinners and Meet & Greet member receptions held in conjunction with the AARC Summer Forum and the International Congress.
- 13. Help to support maintaining a roster and web site for all baccalaureate and graduate respiratory therapist programs.
- 14. Collaborate with CoARC and AARC to improve respiratory therapy education.
- 15. Faculty development through financial support and publishing/presenting opportunities.

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