NBCRNA
National Board of Certification & Recertification for Nurse Anesthetists

2024

Annual Report

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About the NBCRNA

Patient-Centered - Supporting Lifelong Learning

The National Board of Certification and Recertification for Nurse Anesthetists (NBCRNA) is the nation's certifying body for initial, continued, and subspecialty board certification of the more than 62,000 Certified Registered Nurse Anesthetists (CRNAs). Our mission is to guard the well-being of the public by seeking to ensure that those who secure the CRNA credential have the necessary knowledge and skills to practice safely and effectively. We accomplish our mission through the development and implementation of credentialing programs that support lifelong learning among nurse anesthetists. We are a nonprofit organization, and our CRNA and Nonsurgical Pain Management (NSPM-C) credential programs are accredited by both the National Commission for Certifying Agencies (NCCA) and the Accreditation Board for Specialty Nursing Certification (ABSNC).

NBCRNA credentialing provides assurances to the public that CRNAs have met objective, predetermined qualifications for providing nurse anesthesia services. A rigorous national entry process helps ensure that those who secure the CRNA credential enter the profession with the knowledge and demonstrated skills necessary to practice – however this is only the first step. Those who earn the credential dedicate themselves to lifelong learning. While state licensure provides the legal credential for the practice of professional nursing, private, voluntary certification indicates compliance with the professional standards for practice in this vital clinical nursing specialty.

Learn more about NBCRNA by visiting **WWW.NBCRNA.COM/ABOUTUS**.

Mission
The mission of the NBCRNA is to promote patient safety through credentialing programs that support lifelong learning.

Vision
The vision is to be recognized as the leader in advanced practice nurse credentialing.

Promoting Patient Safety by Enhancing Provider Quality

Core Values

Respect
The NBCRNA is highly respected for our programs, innovation and commitment to lifelong learning and safety.

Trust
The NBCRNA has a long and established track record of regulatory excellence and keeping our promises to the public as the basis of our trust.

Recognition
Because of our earned respect and trust, the NBCRNA's credential programs are universally recognized and respected, throughout the entire United States.

Protection
The protection and the faith the public has in us is our sole reason for existing and determines everything we do.

NBCRNA Accreditation

Supporting Lifelong Learning Through Nationally Accepted Standards

The credentialing programs of the NBCRNA are accredited by the National Commission for Certifying Agencies (NCCA) and the Accreditation Board for Specialty Nursing Certification, Inc. (ABSNC). NCCA accreditation means that the NBCRNA credentialing programs meet the highest national voluntary standards for private certification. NCCA accreditation validates the credential against the accepted standards across all credentialed professions. The NBCRNA received its initial accreditation from the NCCA in June 1984.

ABSNC accreditation means that the NBCRNA credentialing programs meet the standards of the only accreditation program for nursing specialties. It promotes the highest quality of specialty nursing practice through the establishment of standards of professional specialty nursing certification. When the NBCRNA received its initial accreditation from the ABSNC in August 1992, it was one of the first national certification bodies to be recognized and approved by the ABSNC.

In June 2022, NBCRNA was re-accredited by the NCCA and the ABSNC for its CRNA and NSPM programs. Each program is re-accredited for the maximum five-year period.

Together, NCCA and ABSNC accreditation provides a strong and widely accepted standard for the nurse anesthetist credential that has been institutionalized in many position descriptions as a practice requirement or as a standard for demonstrating equivalency. It has been recognized in state nurse practice acts and state rules and regulations.

Learn more about NBCRNA accreditation and recognition by visiting **WWW.NBCRNA.COM/ACCREDITATION**.

Letter From the President

Susan McMullan
PhD, CRNA, CNE, CHSE, FAANA, FAAN

As I reflect on 2024, I am simply overcome with gratitude. NBCRNA has experienced an amazing, landmark year, and I am delighted to see our strategic planning bear fruit.

I began my tenure as President with the NBCRNA mission statement at the heart of every decision: to promote patient safety through credentialing programs that support lifelong learning. With the help of our dedicated Board of Directors and the NBCRNA staff, I believe we prioritized the mission with every project and challenge we encountered.

The Continued Professional Certification Assessment (CPCA)

One of the biggest accomplishments of 2024 was encouraging CRNAs to take the CPCA. The CPCA is a required component of the CPC Program, and CRNAs in their second four-year cycle are required to take the CPCA as part of the eligibility to renew their certification.

In 2024, over 17,000 CRNAs completed the CPCA, which is an outstanding achievement. The entire organization worked tirelessly to ensure that CRNAs understand and successfully complete the requirements of the CPC Program as well as take the necessary steps for certification renewal.

Research Study Publication

Another noteworthy moment during my time as President was the publication of our pivotal research study, Transforming Assessments of Clinician Knowledge: A Randomized Controlled Trial Comparing Traditional Standardized and Longitudinal Assessment Modalities. The study found that on average, CRNAs preferred the Longitudinal Assessment (LA) modality over the traditional assessment, and agreed that LA promoted lifelong learning. It also found LA to be more flexible and accommodating, and they agreed that the delivery platform they utilized was easy to use and navigate. We were thrilled to have this study published in a peer-reviewed journal and showcase the diligent work of the NBCRNA staff.

The Maintaining Anesthesia Certification (MAC) Program

As many know, based on the findings of the research study, the NBCRNA Board of Directors made a strategic decision to move the assessment component of the CPC Program to an LA format. On August 1, 2024, we launched the Maintaining Anesthesia Certification (MAC) Program, and it features a streamlined four-year timeline with three key components: MAC Check, MAC Ed, and MAC Dev. The longitudinal assessment component, known as MAC Check, tracks CRNAs' progress and performance over an extended period, helping them stay up to date with anesthesia trends and best practices. This component replaces the CPCA from the CPC Program. MAC Ed (Class A Credit) requires CRNAs to earn continuing education credits via online courses and workshops just like they always have, and MAC Dev (Class B Credit) supports professional growth with activities designed to refine skills and experiences and is the same as its predecessor in the CPC Program.

By the end of 2024, over 23,000 CRNAs have enrolled in the MAC Program, and are continuing their commitment to lifelong learning. We are excited for all CRNAs to be enrolled in MAC, and we will communicate with CRNAs directly when they are eligible to begin, as everyone is on their own individual timeline.

Recognition and Acknowledgments

These accomplishments are a testament to the hard work of the staff and volunteers who are committed to the CRNA community and patient safety. We have made great strides in 2024, and I am excited about the future of nurse anesthesia.

It has been an absolute pleasure working together with the NBCRNA Board of Directors and our Chief Executive Officer John C. Preston DNSc, CRNA, APRN, FAANA, FNAP, FAAN. It is a privilege to be part of such an energetic and engaged team as we collectively work to enhance the CRNA profession. Dr. Preston, along with his entire staff at the NBCRNA, are an exceptional group who strive to safeguard the CRNA credential and ensure that it remains an authoritative gold standard in advanced practice nursing certification.

Message From the CEO

John C. Preston
DNSc, CRNA, APRN, FAANA, FNAP, FAAN

This past year has been nothing short of extraordinary. As I reflect on 2024, I am amazed by the NBCRNA's remarkable achievements as we continued our commitment to patient safety through credentialing programs that support lifelong learning. Additionally, I am extremely grateful to our Board of Directors, who have provided unwavering support for our journey. Finally, I must recognize the NBCRNA staff, whose talent, creativity, and dedication have led to our great accomplishments. Everything all of us do is because we are committed to you, the CRNA community, and your personal journey with your individual continued certification.

2024 in Review

First, I would like to highlight the outstanding work of our Board of Directors. I've had the distinct pleasure of working very closely with our Board, and I am inspired by both their dedication to the CRNA community and equally by their commitment to patient safety. Our Board was a crucial part of our success in 2024, as their support, guidance, and forethought helped us navigate many complex situations and decisions. It continues to be my honor to have the opportunity to work alongside this incredible group of exceptional leaders.

In the end of course, the achievements of the NBCRNA and the successes of its programs, initiatives and services are the result of much hard work by our staff members. I am fortunate to have some of the most highly skilled and proficient staff with whom to work. These folks show up every day eager to meet the needs of the community, while still upholding our mission and core values. I am deeply appreciative of their commitment and expertise, as well as extremely proud of the work that the NBCRNA staff have undertaken on behalf of the entire CRNA community.

Key 2024 Achievements:

Publication of Longitudinal Assessment Research Study

In 2024, we published a research study in the journal Practice Assessment, Research, and Evaluation. The study, Transforming Assessments of Clinician Knowledge: A Randomized Controlled Trial Comparing Traditional Standardized and Longitudinal Assessment Modalities, shows the benefits of longitudinal assessment (LA) for the continued certification of healthcare professionals, particularly CRNAs. The findings from this research are critical to NBCRNA's mission of promoting patient safety through lifelong learning for CRNAs and the results supported our strategic decision to move our certification assessment component from a once-every-eight-years format to a continual longitudinal assessment format. This study represents a lot of hard work from both the NBCRNA Board and staff, and ultimately it led us to make one of our most significant credentialing moves in nearly 20 years – the move to our new MAC Program.

Launch of the Maintaining Anesthesia Certification (MAC) Program

On August 1, 2024, we launched the MAC Program as the new approach for continued certification of CRNAs. MAC features a pioneering longitudinal assessment component that measures and solidifies core nurse anesthesia knowledge, while also supporting adult learning principles. As the only nursing organization to implement this advanced methodology, we set a new benchmark in continued certification. Not only does this reinforce our commitment to CRNA excellence, but it supports our commitment to lifelong learning as well. The MAC Program has once again identified us as a leader in the credentialing industry and in specific, in the specialized area of advanced practice nursing certification.

Looking Ahead:

2024 was a defining year for the NBCRNA. The accomplishments we made over the past year have demonstrated this journey was truly worthwhile. I have much to be grateful for as the CEO of the NBCRNA, and at the top of my list are our staff, our Board of Directors, and each and every one of our volunteers – all of whom are dedicated to the protection and betterment of the profession, by helping all CRNAs demonstrate their high-level knowledge through successful engagement in our rigorous and highly respected credentialing programs. The future of nurse anesthesia credentialing is bright, and everyone at the NBCRNA is committed to continuously reinforcing our strong foundation to nurture and support ongoing future success.

NBCRNA 2024 Board of Directors

The NBCRNA is managed by a Board of Directors who are recognized as leaders in nurse anesthesia and related fields. The members of the Board are comprised of certified registered nurse anesthetists, as well as a board-certified surgeon and anesthesiologist, both of whom have a current working relationship with nurse anesthetists, and a representative of the public at large. Members of the Board are elected to serve staggered three-year terms.

President

Susan McMullan, PhD, CRNA, CNE, CHSE, FAANA, FAAN

Dr. Susan McMullan is an Associate Professor and Director, BSN-DNP Pathway in Nurse Anesthesia at the University of Alabama at Birmingham (UAB) School of Nursing. She earned her BSN from University of Michigan, her MSN in Nurse Anesthesia from Rush University, and her PhD from Rutgers, the State College of New Jersey. Prior to her move to Birmingham, she worked full time as a clinical CRNA in Chicago. In her time at UAB, she has received over $500,000 in Nurse Anesthesia Traineeship and AANA Foundation Research Grants. She also developed the only anesthesia workload instrument and was key in increasing the number of CRNAs in Alabama during a critical workforce shortage. She has been inducted as a Fellow of both the American Association of Nurse Anesthesiology and the American Academy of Nursing. In 2019 she received the Alabama Association of Nurse Anesthetists (ALANA) Outstanding Advocacy and Service to the CRNA Profession Award for her dedication to the profession. Susan maintains a clinical faculty practice at UAB Callahan Hospital.

Vice President

Garry Brydges, PhD, DNP, MBA, MHA, CRNA, ACNP-BC, FAAN, FAANA

Dr. Garry Brydges is the Director of Quality and Outcomes in Anesthesia and the former chief nurse anesthetist for 17 years at MD Anderson Cancer Center in Houston, Texas. Currently, his work includes a subdomain in artificial intelligence known as neural network machine learning for developing a perioperative oncologic collaborative registry. He is adjunct faculty at the University of Texas and Baylor College of Medicine Nurse Anesthesia Programs, Texas Woman's University Nursing Graduate Programs, and adjunct professor at Case Western Reserve University - Shaughnessy Nurse Leadership Academy. Garry graduated from the University of Texas Nurse Anesthesia Program and was the recipient of the Agatha Hodgins Outstanding Graduate Award. He has an extensive academic background also graduating from the University of Texas Acute Care Nurse Practitioner Program before nurse anesthesia training, concentrating in cardiovascular surgery. He completed his DNP at Texas Christian University in 2011, focusing research in Preoperative Considerations for the Heart Failure Patient with Cardiac Resynchronization Therapy. Other degrees include an Executive MBA, Masters in Healthcare Administration, as well as a PhD in Financial Management and Economics in Healthcare Delivery, at Texas Woman's University. In 2021, he was recently inducted as an inaugural fellow of the American Association of Nurse Anesthetists for his leadership nationally and globally contributing to the nurse anesthesia profession. He completed his term in 2019 as the 79th President of the American Association of Nurse Anesthetists. He was the President of the Texas Association of Nurse Anesthetists from 2012-2013.

Treasurer

Robert T. Laird, BSN, CRNA

Robert Laird is an anesthetist in private practice in the Abilene, Texas, area. He has been in private practice for over 35 years. Robert has served in many capacities with the Texas Association of Nurse Anesthetists, including four terms as President. He graduated from Texas Christian University with a BSN, before being accepted into the anesthesia residency program at Wichita General Hospital in Wichita Falls, Texas. While there, he developed an air transport system for sick babies, served as field triage nurse during the Wichita Falls tornado of 1979, and helped develop policies for the use of CRNAs in the Emergency Department. After graduation, Robert was recruited by a private hospital in Abilene where he became the pediatric specialist for the center. Robert worked with both State and National organizations to lobby for rules allowing CRNAs to be accepted by Medicare as independent practitioners. Robert has continued to practice full time, managing a four- CRNA group and serving as Chief of Anesthesia for four ASCs and one rural hospital. He also serves as part-time adjunct instructor for a local university nursing program. Robert has served as a testifying expert in several cases involving CRNAs and continues to provide research and opinions concerning standards of care.

Directors

Lori Anderson, DNP, MSN, CRNA, FAANA

Dr. Lori Anderson is an Associate Professor, and the Chair/Program Director for the Department of Nurse Anesthesia at Rosalind Franklin University, North Chicago, IL. Lori earned her BSN and MSN from Northern Illinois University, and her DNP from Rush University. She was a past president of the Illinois Association of Nurse Anesthetists and a past member of the Illinois Board of Nursing.

Derrick C. Glymph, PhD, DNAP, CRNA, CHSE, COL., USAR, FAANA, FAAN

Dr. Derrick Glymph is a Clinical Education Coordinator for the Duke University Nurse Anesthesia Program and also serves as the Deputy Commander of Nursing in the Army Reserves, where he holds the rank of Colonel. He is a former NBCRNA Self-Evaluation Examination (SEE) item writer and played a pivotal role in transforming the SEE to correlate with the National Certification Exam. With over 16 years of experience, Dr. Glymph has made significant contributions to the advancement of nurse anesthesia education and clinical research as an Army CRNA, faculty member and administrator.

Sara C. Gonzalez, MD

Dr. Sara Gonzalez is the anesthesiologist member of the NBCRNA Board. Dr. Gonzalez received her medical degree from Wake Forest University School of Medicine and completed her residency training at Naval Medical Center San Diego (NMCSD) and obstetric anesthesiology fellowship at Cedars Sinai Medical Center. She serves as a Captain in the United States Navy at NMCSD where she is a staff obstetric anesthesiologist and the Director for Expeditionary Medicine. She deployed to Kandahar, Afghanistan in 2013 in support of Operation Enduring Freedom. She is an Assistant Professor of Anesthesiology at the Uniformed Services University of Health Sciences. She enjoys teaching residents and students. Her academic interests include provider wellbeing, operational medicine, and maternal patient safety.

Becky LeBuhn, MA

Rebecca (Becky) LeBuhn is a co-founder and Chair of the Board of Citizen Advocacy Center, and is responsible for research, policy development, and publications. She has coordinated public participation on regulatory boards, specialty certifying bodies, federal regulatory proceedings, private sector decision-making, and technical standards development in such diverse fields as healthcare, medical devices, solar energy conversion, and indoor air quality. A professional writer, Ms. LeBuhn is the author of numerous publications and newsletters on various subjects including health professional licensure, specialty certification and recertification, continuing professional development, consumer-business relations, regulatory and healthcare policy, and financial services. Active in the public interest community, Becky has been the President of the National Consumers League and of the Continental Association of Funeral and Memorial Societies. She currently serves as a public member of the American Board of Medical Specialties Stakeholder Council and in the past served as the public member on the National Commission for Certifying Agencies (NCCA), and on the boards of directors of the Institute for Credentialing Excellence (I.C.E.), the American Board of Radiology Foundation (ABRF), and ASTM International. She received the 2020 Mary Macomber Service Award from I.C.E. Ms. LeBuhn earned her B.A. in Economics and Government at Wells College and her M.A. in Soviet Studies at the Johns Hopkins School of Advanced International Studies.

Sarah E. Giron, PhD, CRNA, FAANA

Dr. Sarah Giron is a full-time Academic and Clinical Instructor for the Kaiser Permanente School of Anesthesia (KPSA) in Pasadena, California and Adjunct Professor at California State University, Fullerton (CSUF) School of Nursing. She is the Director of the Kaiser Permanente Anesthesia Technology program and Co-Lead of the DNP scholarly project process. Her didactic expertise includes neurosurgical cases, organ transplant, burn anesthesia, cardiac and pharmacology. Dr. Giron holds a BS in Biochemistry and Cellular Biology from University of California San Diego, MS in Nurse Anesthesiology from Columbia University, and a PhD from University of San Diego with a focus in Psychoneuroimmunology. She has previously served on the Board of Directors for the California Association of Nurse Anesthetists, Chaired the Longitudinal Assessment Committee for NBCRNA and is published in countless textbooks and journals.

Sonya D. Moore, DNP, MSN, CRNA, FAANA, FAAN

Dr. Sonya Moore, with over 20 years of nurse anesthesia experience, is the Program Director of the Nurse Anesthesia Program at Case Western Reserve University, where she developed and implemented the Leadership Excel and Achievement Program (LEAP). As a part of her commitment to practice, she currently holds a PRN position with The Cleveland Clinic and an independent locums' practice, through SDMS Anesthesia limited. Sonya is involved in the nurse anesthesia community as a member of the AANA and OSANA Board of Directors, and while on the AANA board, served as liaison to the NBCRNA. She values her roles outside of the community, such as being the co-chair of the MSK Leadership Academy DNP Founders Circles, which engages her with leaders in nursing at the national and international levels.

Ellen Reynolds, MD, FACS

Dr. Ellen M. Reynolds, MD, FACS, is a fellowship trained pediatric surgeon with over 20 years of experience of general pediatric and trauma surgery at St. Luke's Children's Hospital, Boise, Idaho. Her particular interest is the management and treatment of chest wall deformities. Dr. Reynolds has helped to pioneer techniques used in the surgical correction of pectus excavatum and carinatum deformities. Dr. Reynolds earned her bachelor's degree at Pomona College; and attended medical school at Washington University in St. Louis where she graduated first in her class. She completed her general surgery residency at Massachusetts General Hospital, and a fellowship in pediatric surgery at Children's Hospital of Michigan. Dr. Reynolds volunteers her time with IPSAC organization, serving as an educator for Danang Children's Hospital in Vietnam.

Audrey Rosenblatt, PhD, CRNA

Dr. Audrey Rosenblatt is the Director of Advanced Practice Anesthesia Services at Lurie Children's Hospital where she oversees management, strategic planning, and clinical care of pediatric patients. Dr. Rosenblatt has over a decade of clinical experience as a CRNA in pediatric anesthesia. Her time at Lurie Children's Hospital has been one of promotion and expansion, growing the team from 0 to 26 CRNAs. Dr. Rosenblatt supported development at Lurie within pediatric subspecialties creating dedicated teams for pediatric cardiac anesthesia in the Lurie Heart Center and maternal-fetal anesthesia within the Chicago Institute for Fetal Health. An advocate for clinical education, Lurie is the pediatric anesthesia training site for the Chicagoland CRNA programs. Lurie received accreditation from the COACRNA for a CRNA pediatric anesthesia fellowship in 2021 and Dr. Rosenblatt serves as the director. She is an assistant professor in Rush's College of Nursing and serves as the assistant program director of didactic education in the nurse anesthesia program track. Her research expertise is in qualitative methods, with a focus on medical decision-making and well-being during clinical education.

Rishelle Yufei Zhou, DNAP, LL.B., CRNA

Dr. Rishelle Yufei Zhou is a CRNA and Assistant Professor at the Oregon Health and Science University School of Nursing. She also serves as a CRNA for the Veterans Affairs Portland Health Care System, is a member of the NBCRNA Evaluation and Advisory Committee and is President of the Association of Veterans Affairs Nurse Anesthetists. Prior to her current roles, Dr. Zhou worked at the international accreditation organization for hospitals, Det Norske Veritas. She is a former NBCRNA Continued Professional Certification (CPC) item writer and served as an Emerging Leader Fellow on the NBCRNA Board of Directors from 2017 to 2019.

Emerging Leader Fellows

Priscilla Aguirre, DNP, CRNA, CHSE

Dr. Priscilla Aguirre is an Assistant Professor at the University of Maryland School of Nursing (UMSON). Her passion for nurse anesthesia led her to obtain a Doctorate of Nursing Practice Degree at the University of Buffalo in 2017. At UMSON, Priscilla works as the Director of Simulation and provides low- and high-fidelity simulation experiences for nurse anesthesia students. She has designed and implemented numerous high-fidelity intraoperative simulations that include OB, PEDs, difficult airway, and cardiac resuscitation. In 2020, Priscilla received the New Faculty Award for demonstrating exceptional contributions to teaching, scholarship, and service. Recently, she was granted the Dean's Teaching Scholars Award for the study titled "The Impact of High Fidelity Simulation on Nurse Anesthesia Students' Knowledge, Self-Confidence, and Psychomotor Skills" in which she's the Primary Investigator.
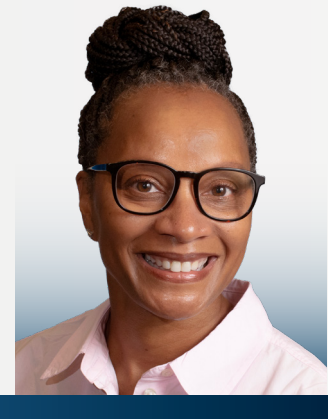
Terrica Harris, DNP, CRNA

Dr. Terrica Harris is a CRNA at Grady Memorial Hospital and received her BSN from Emory University and her MSNA from Wake Forest School of Medicine. She recently finished her DNP at Georgia State University. In addition to her role at Grady Memorial Hospital, Terrica is the Chief Executive Officer and Owner of Avery Emery Anesthesia LLC and part-time faculty at Emory's nurse anesthesia program. She previously served on NBCRNA National Certification Exam Item Writing Committee.

NBCRNA Elections

New Board Members

In 2024, NBCRNA welcomed three newly elected CRNAs to its Board of Directors, and a new Emerging Leader Fellow, for the 2025 fiscal year. The new directors began their three-year terms in October 2024. The NBCRNA looks forward to their contributions to the Board of Directors as it relates to the mission of the NBCRNA on behalf of the profession.

Dawn Bent, DNP, CRNA, FAANA

Dr. Dawn Bent has been an anesthesia provider for over 20 years and has been an anesthesia educator for over 15 years. Dr. Bent currently serves as Program Director at the University of Pennsylvania in Philadelphia where she oversees didactic education, including the basics of anesthesia, inhalational agents, anesthesia pharmacology, basic and advanced monitoring, and pediatric content. Additionally, Dr. Bent serves on the Board of Trustees for the Pennsylvania Association for Nurse Anesthetists as the Chair for the Membership Engagement Committee and a member of the Communications Committee. Dr. Bent is a Certificant-Elected Director (CED) member of the NBCRNA Board of Directors.

Benoit Blondeau, MD, MBA, FACS

Dr. Benoit Blondeau, MD, MBA, FACS is the surgeon member of the NBCRNA board. He obtained his PhD from the Faculté de Médecine de Tours, France and did his fellowship in surgical critical care at the University of Connecticut. He has served in various positions over the past 15 years, in both administrative and leadership capacities. He served as an Associate Professor of Surgery and Palliative Care, and the Trauma Medical Director at the University of New Mexico and is currently the Chair for the Department of Surgery at HealthPartners in Minnesota. He also works with the Minnesota Chapter of the American College of Surgeons, where he serves as a Site Reviewer for the Commission on Cancer, and as the Vice Chair Committee on Trauma.

Sara Myers, DNP, CRNA

Dr. Sara Myers practices anesthesia at Truman Medical Centers in Kansas City, MO and is a clinical instructor and Professor for the Truman Medical Center School of Nurse Anesthesia. Dr. Myers earned a BA from the University of Kansas, a BSN from Creighton University, and her DNP from the University of Missouri Kansas City. She has volunteered on a variety of national committees and panels, including the Medical Missions Foundation Board of Directors (2023-present), the NBCRNA Board of Directors Emerging Leader Fellow (2020-2022), and the AANA Practice Committee (2017-2020). Sara enjoys participating in at least one medical mission trip annually.

Emerging Leader Fellow

Jasmine C. Kamran, DNP, CRNA, NSPM-Fellow

Dr. Kamran is a CRNA at Ambulatory Anesthesia Solutions of Indiana, practicing at several Indiana University Health Surgery Centers. She received her BSN and MS at Indiana University-Bloomington and received her Doctor of Nurse Anesthesia from Marian University-Indianapolis. Jasmine is currently an NSPM Fellow at Texas Christian University and is a 2024 candidate. She has served as both a mentor and clinical ambassador for the Black Girls Do Stem organization, and has also served on the Diversity, Equity, and Inclusion Committee for the AANA.

NBCRNA Leadership

Chief Executive Officer
John C. Preston, DNSc, CRNA, APRN, FAANA, FNAP, FAAN

John Preston was named NBCRNA Chief Executive Officer in April 2021 after six years as the NBCRNA Chief Credentialing Officer. John brings more than 36 years of experience in nursing and advanced practice nursing, of which 25 were spent leading nurse anesthesia education and professional development. Prior to joining the NBCRNA, John has served as the Associate Program Director at Rosalind Franklin University, the Graduate Program Director for the University of Tennessee, and the Senior Director of Education and Professional Development at the American Association of Nurse Anesthetists.

Chief Operating Officer
Leah Cannon, CPA, CAE, SHRM-CP

Leah Cannon joined the NBCRNA in May 2011 after consulting with NBCRNA for two years. In her current role, Leah oversees the finance, human resources, and office operations. Leah has over 14 years' experience working with nonprofit organizations and has also worked in public accounting and private industry.

Chief Credentialing Officer
Christopher Gill, PhD, MBA, CRNA, ACNPC-AG, FACHE

Christopher Gill joined NBCRNA in August 2021 and has progressive leadership experience in the profession of nursing, including a two-year term as an Emerging Leader Fellow on the NBCRNA Board of Directors. Prior to joining the NBCRNA, he served as a Regional Director for the New England and Northwell territories at North American Partners in Anesthesia. He has also served as Chief CRNA and Clinical Coordinator prior to becoming a Regional Director.

Chief Assessment Officer
Tim Muckle, PhD, ICE-CCP

Tim Muckle returned to NBCRNA in June 2021, having previously served as the NBCRNA Senior Director of Testing from 2008 through 2017. Tim has published numerous articles in testing-related scientific journals and has been a regular presenter at meetings of the National Council on Measurement in Education, the Association of Test Publishers, and the Institute for Credentialing Excellence, among others. Prior to returning to the NBCRNA, Tim most recently served in the role of Senior Director, Psychometrics and Testing, with the Board of Pharmacy Specialties.

2024 Milestones

NBCRNA Research Demonstrates Benefits of Longitudinal Assessment for Lifelong Learning

In 2024, the National Board of Certification and Recertification for Nurse Anesthetists published a pivotal research study in Practice Assessment, Research, and Evaluation. The study, Transforming Assessments of Clinician Knowledge: A Randomized Controlled Trial Comparing Traditional Standardized and Longitudinal Assessment Modalities, showcases the benefits of longitudinal assessment (LA) for the continued certification of healthcare professionals, particularly Certified Registered Nurse Anesthetists.

LA is a continuous assessment format that allows healthcare professionals to demonstrate their knowledge and skills over time. Unlike traditional point-in-time assessments, LA fosters lifelong learning by offering continuous evaluation and providing immediate feedback

ICE-CCP lead researcher and Chief Assessment Officer at NBCRNA. "The results of this landmark study, the first of its kind, demonstrate how a shift to the LA assessment modality represents a significant opportunity to enhance the way we approach continuous learning for CRNAs and across healthcare."

Significantly, the study also demonstrated that LA is more conducive to lifelong learning. In the LA format, CRNAs received immediate and specific feedback to each question answered. At first, the mean score of the traditional assessment group exceeded that of the LA group. However, after scoring the LA group's most recent responses which included previously administered questions that were originally answered incorrectly, the LA group's scores were higher. This change over the course

NBCRNA Launches the Maintaining Anesthesia Certification (MAC) Program, Leading the Industry with Longitudinal Assessment

The National Board of Certification and Recertification for Nurse Anesthetists launched its Maintaining Anesthesia Certification (MAC) Program as the new approach for continued certification of Certified Registered Nurse Anesthetists in 2024. It features a pioneering longitudinal assessment component – an evaluation modality that measures and solidifies core nurse anesthesia knowledge utilizing adult learning principles. As the only nursing organization to implement this advanced methodology, NBCRNA is setting a new benchmark in continued certification and reinforcing its commitment to CRNA excellence and lifelong learning.

Developed in ongoing collaboration with CRNAs, including a one-year research study, the MAC Program meets the evolving needs of nurse anesthetists. MAC

scientific rigor, longitudinal assessment supports CRNAs in lifelong learning and continuous improvement for safe, quality patient care.

"NBCRNA is dedicated to meeting the progressive needs of CRNAs, as well as promoting their lifelong learning and maintaining their history of provider excellence in nurse anesthesia," said John C. Preston, DNSc, CRNA, APRN, FAANA, FNAP, FAAN, Chief Executive Officer of NBCRNA. "With the introduction of longitudinal assessment and the new MAC Program, NBCRNA continues to remain contemporary while leading the way in advanced practice nursing certification."

The value of continued certification is underscored by recent patient survey findings. In 2023, NBCRNA

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to each response. It was developed to align with adult learning principles, which show that factors including a convenient knowledge platform, and learning through a repetitive experience to promote education. This type of assessment also provides flexibility for busy healthcare professionals, as they can engage with the material at their own pace and time.

The study, a controlled trial involving 1,000 CRNAs randomized into two conditions (the traditional CPCA and LA), found that on average, CRNAs preferred LA over a traditional assessment, and more CRNAs agreed that LA promoted lifelong learning. It also found LA to be more flexible and accommodating, and they agreed that the platform was easy to use and navigate.

"CRNAs are held to the highest standards in the nursing profession, and continued certification is an integral part of their dedication to their patients," said Tim Muckle, PhD,

of the study shows the value of feedback and its impact on ongoing learning.

"The findings from this research are critical to NBCRNA's mission of promoting patient safety through lifelong learning for CRNAs. These findings also helped our Board of Directors to make the strategic decision to move our certification assessment component to an LA format," said John C. Preston, DNSc, CRNA, APRN, FAANA, FNAP, FAAN, Chief Executive Officer of NBCRNA. "At NBCRNA, we are committed to ensuring that CRNAs are equipped with the necessary tools to evaluate their anesthesia knowledge – and therefore provide the highest quality care for their patients."

For more information, visit **WWW.NBCRNA.COM/MAC**.

features a streamlined four-year timeline with three key components: MAC Check, MAC Ed, and MAC Dev. The longitudinal assessment component, known as MAC Check, tracks CRNAs' progress and performance over an extended period, helping them stay up to date with anesthesia trends and best practices. MAC Ed facilitates continuing education through courses and workshops with prior approval from an accredited organization, and MAC Dev supports professional growth with activities designed to refine skills and experiences.

Longitudinal assessment (MAC Check) is at the heart of the MAC Program. It is a transformative approach that redefines how CRNAs demonstrate and enhance their expertise. This state-of-the-art modality provides immediate feedback, identifies areas for improvement, and presents diverse learning topics through quarterly questions. Based on sound psychometric principles and

conducted a survey revealing that 85% of patients consider it very important for CRNAs to complete continued certification components that include knowledge assessment. Furthermore, 91% of patients greatly trust CRNAs in their role as educators and members of the healthcare team. After learning more about NBCRNA certification, 98% of patients valued the continued certification requirements for CRNAs, highlighting the critical role that ongoing education plays in maintaining patient trust and safety.

The MAC Program aligns with regulatory standards across all state Boards of Nursing. On August 1, 2024, eligible CRNAs began to transition from the current Continued Professional Certification (CPC) Program to the MAC Program based on their continued certification cycle.

For more information on the MAC Program, visit **WWW.NBCRNA.COM/MAC**.

Maintaining Anesthesia Certification (MAC) Overview

Maintaining Anesthesia Certification

On August 1, 2024, NBCRNA launched the MAC Program for CRNAs, replacing the CPC Program. Over 23,000 CRNAs are enrolled in the MAC Program, and the NBCRNA plans to have all CRNAs enrolled by 2026.

MAC enables CRNAs to stay current with evolving healthcare advancements in advanced practice nurse anesthesia, offers a streamlined four-year certification cycle and better reflects the evolving professional needs. MAC simplifies lifelong learning with consistency and flexibility, integrating all components into one clear program. MAC complies with Advanced Practice Registered Nurse regulatory standards across all state Boards of Nursing, ensuring seamless practice by CRNAs and upholding the highest standards in safe, quality patient care.

There are three components to the MAC Program:

MAC Check
(replaces the CPCA)

CRNAs solidify core knowledge through a self-paced, dynamic platform utilizing longitudinal assessment. MAC Check replaces the CPCA, which is a proctored test that is taken once every eight years.

MAC Ed
(60 Class A Credits)

CRNAs earn Class A continuing education credits via online courses and workshops.

No Core Modules
Core Modules are not required in the MAC Program.

MAC Dev
(40 Class B Credits)

Participants foster professional development through activities tailored to CRNAs.

MAC Check

The newest component in the MAC Program, MAC Check, is a self-paced, dynamic online platform that uses a longitudinal assessment format to support lifelong learning. MAC Check replaces the CPCA component of the CPC Program and features quarterly knowledge checks completed at any time with real-time, ongoing feedback to facilitate learning.

This format was developed in collaboration with CRNAs and underwent a one-year research study to ensure its effectiveness.

In 2024, over 23,000 CRNAs enrolled in MAC Check.

Immediate Feedback

Convenient Platform

Self-Paced Structure

Continued Professional Certification (CPC) Overview

The CPC Program is the legacy program of the NBCRNA and will soon be fully replaced by the MAC Program. The CPC Program is designed to meet the APRN regulatory requirements of every state Board of Nursing.

The CPC Program includes four components:

- **Class A Credits:** CRNAs earn 60 Class A Credits every four-year cycle.
- **Class B Credits:** CRNAs earn 40 Class B Credits every four-year cycle.
- **Core Modules:** CRNAs must complete four Core Modules every four-year cycle.
- **Continued Professional Certification Assessment (CPCA):** 150-question performance standard assessment taken in the second four-year cycle.

The Continued Professional Certification Assessment (CPCA)

As CRNAs move through the CPC Program, they are required to take the CPCA, a performance standard assessment. The 150-question assessment covers knowledge in the four core domains of nurse anesthesia practice, has a three-hour time limit and may be taken at a testing center or at home under remote-proctor conditions. The CPCA is not a pass/fail exam, but rather can be used as a self-assessment.

In 2024, 17,107 CRNAs took their CPCA.

The CPCA assesses knowledge in the four core domains of nurse anesthesia practice:

Airway Management

Applied Clinical Pharmocology

Human Physiology and Pathophysiology

Anesthesia Equipment, Technology, and Safety

Learn more about the CPCA at **WWW.NBCRNA.COM/CPCA**.

Credentialing Research

Evaluation and Research Advisory Committee (ERAC)

The NBCRNA through its Evaluation and Research Advisory Committee (ERAC) continued to make significant progress on its **research agenda** in 2024.

Firstly, an article entitled "Evolution of Effectiveness of the Self-Evaluation Exam: A Mixed Methods Study of Predictive Validity and Perceived Utility," offering valuable insights into the SEE's effectiveness since its 2016 configuration, was approved for publication in the AANA Journal (publication date TBD).

Secondly, an ERAC workgroup has formalized the program evaluation plan for the NSPM-C certification. The program evaluation plan features a mix-method study to better understand the impact of the NSPM-C, NBCNRA's only subspecialty certification program, since its inception.

The program evaluation will commence with a survey to practitioners in NSPM in Q1 2025 and will progress through a series of focus groups later in the year.
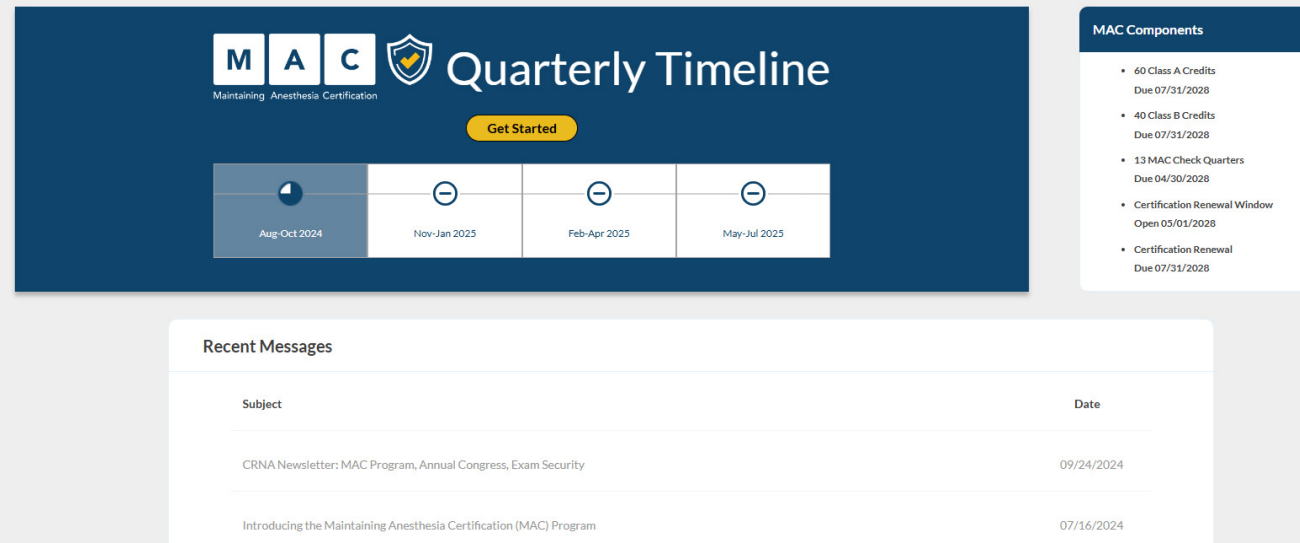
Thirdly, the NBCRNA has evaluated the presence of any bias in its credentialing practices by extending differential item functioning (DIF) analyses to the NCE, SEE, and CPCA. A diverse panel composed of CRNAs has completed its 2024 review of any items exhibiting DIF, ensuring that any bias is properly removed or otherwise mitigated.

Looking ahead, the ERAC will collaborate to develop the next iteration of the NBCRNA research agenda, aligning it with the Board's strategic priorities for the next five years.

Digital Enhancements

NBCRNA Portal

In 2024, the NBCRNA Portal was optimized for CRNAs enrolled in the MAC Program, improvements included:
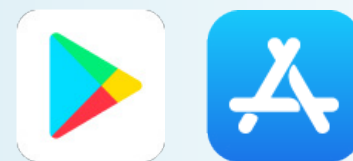
- A new banner displaying individual MAC Check timelines.
- Important dates for all MAC components.
- A list of recent messages from NBCRNA.
- Enhancements to the mobile experience.

MAC Check App

In addition to the portal optimization, CRNAs enrolled in the MAC Program also have access to a MAC Check app on their mobile devices. The app provides the best mobile user experience.

Download the MAC Check App

CRNAs By The Numbers

32.9

Average Age at Start of Career: 32.9 years

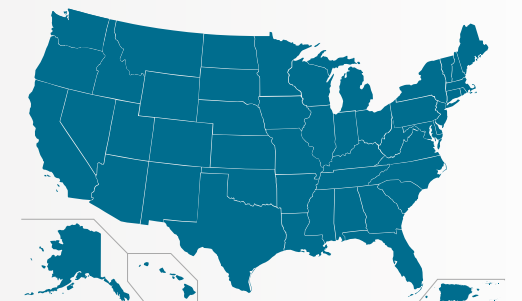**47.5**

CRNA Overall Average Age: 47.5 years

2,866

2,866 newly certified CRNAs entered the profession in 2024.

62,000

There are more than 62,000 nurse anesthesia professionals who hold the CRNA Credential.

CRNAs practice in every U.S. state and province and in every practice setting requiring anesthesia, safely administering anesthetics to patients across the United States each year.

CRNA Demographics

60% Female
40% Male

Student Registered Nurse Anesthetists (SRNAs) and Graduates

10,501

More than 10,501 Students and Graduates are working hard to prepare to be leaders and competent care providers in the dynamic nurse anesthesia profession.

3,970*

Number of Newly Enrolled Students During 2024: Approximately 3,970*

*Partial year; enrollment numbers for this period will increase as submissions are reported from Nurse Anesthesia Education Programs

142

There are 142 Accredited Nurse Anesthesia Programs throughout the United States.

SRNA Demographics

64% Female
36% Male

Advancing the Profession: Initial Certification

Each year, the NBCRNA administers various examinations including the National Certification Examination (NCE) to enter the profession, the Self-Evaluation Examination (SEE) for nurse anesthesia students, and the subspecialty Nonsurgical Pain Management Certification (NSPM-C) Examination.

National Certification Examination (NCE)

Candidates in the 142-nurse anesthesia educational programs throughout the United States sit for the NCE, which requires a passing score to become a CRNA. The NBCRNA administers the NCE to measure the knowledge necessary for entry-level nurse anesthesia practitioners.

From January 1, 2024, through December 31, 2024, a total of 3,279 NCEs were administered; 2,740 candidates were first-time takers with a pass rate of 89.3%. There was a total of 539 repeat administrations of the exam with an overall pass rate of 60.3%. A list of newly certified CRNAs by state of residence is published monthly on the NBCRNA website.

NCE Exit Survey Results

The NBCRNA strives to uphold our customer service commitment to excellence. Overall satisfaction remains high.

From January 1, 2024, through December 31, 2024:

98% 98% of NCE candidates were satisfied with the NBCRNA testing experience.

Self-Evaluation Examination (SEE)

The SEE is an important part of the preparatory process to become a CRNA. The SEE is a voluntary examination with three objectives: to provide information to students about their progress in the nurse anesthesia educational program; to provide information to program administrators on how well their programs are preparing students with the knowledge they need for anesthesia practice; and to prepare students for NCE experience. From January 1, 2024, through December 31, 2024, a total of 6,986 candidates took the SEE.

SEE Predictability

The NBCRNA strives to support Student Registered Nurse Anesthetists (SRNAs) in their journey to become a CRNA. During their education program, students are eligible to take the SEE, which provides insights into their preparedness for the NCE to enter the profession. Each year, a predictability study is conducted on the SEE to gauge predictability in projected performance on the NCE.

- According to the SEE survey, 84.6% of individuals who took the SEE agreed that it helped prepare them to take the NCE.

- An analysis of 2024 SEE and NCE performance showed that, similar to previous years, a clear, positive correspondence exists between the SEE scores and the NCE scores. This information is especially important for nurse anesthesia educational programs to identify how their program is preparing students for the NCE, the examination required to enter the profession.

View the SEE Research Brief at
WWW.NBCRNA.COM/INITIAL-CERTIFICATION

Subspecialty Certification: Nonsurgical Pain Management (NSPM) Continues Growth in 2024

Since inception of the NSPM Program through December 31, 2024, 220 CRNAs have earned the NSPM-C credential, 38 of which were achieved in 2024. The NBCRNA's NSPM program was initially developed in 2015 in response to challenges continually faced by nurse anesthetists who practice nonsurgical pain management. The NBCRNA subspecialty certification for nurse anesthetists measures the knowledge, skills and abilities of CRNAs for practice in the field of nonsurgical pain management. A list of new CRNA NSPM-Certificants is published on the NBCRNA website following each exam testing window.

The NSPM credential program is accredited by the NCCA and the ABSNC. Find out more about the NSPM-C Program by visiting the NBCRNA website at **WWW.NBCRNA.COM/NSPM**

NSPM Exam Statistics

From January 1, 2024, through December 31, 2024:

91% The NSPM-C had a 91% pass rate.

38 38 CRNAs earned the NSPM-C credential during 2024.

220 220 CRNAs now hold the NSPM-C credential.

Supporting Our Colleagues

Contribution/Sponsorships

Throughout the year, the NBCRNA proudly sponsors and supports colleagues across the nurse anesthesia profession, as well as the advancement of the credentialing industry, to support program development, credentialing research, the nursing community, and nurse anesthesia students with grants and sponsorships.

During 2024, the NCBRNA contributed to the following programs and organizations to support the CRNA profession and credentialing:

Leadership Excel and Achievement Program (LEAP)

Diversity In Nurse Anesthesia Mentorship Program (DNAMP)

Institute for Credentialing Excellence

American Board of Nursing Specialties

AANA Annual Congress Student Luncheon

AANA Foundation

NBCRNA Volunteer Program

Committees and Subcommittees

The work of the NBCRNA is dependent on the expertise provided by the dedicated CRNAs who volunteer their time each year. During 2024, more than 150 volunteers served on various NBCRNA committees, subcommittees, and panels throughout the year. The NBCRNA would like to thank these individuals for their important work and contributions to their profession. The NBCRNA also thanks the many CRNA ambassadors who provide CPC Program and MAC Program presentations to their colleagues across the nation.

CPCA Practice Panel

CHAIR Nicole Irick	Natalie Heather	Jacqueline Paugam
Sophia Assem	Maria Elena Johnston	Jordan Popp
Craig Atkins	Darlena Jones	Patricia Satariano-Hayden
Sonia Mae Beduya	Vadim Korogoda	Elvira Sayfutdinova
Dee Bender	Travis Laffoon	Sekina Showers
Kristin Bowden	Nikita Layson	Jingjing Cheng Sparrow
Deniz Dishman	Lienda Littlejohn	Nicolas Stalnaker
Darlene Falco	Lisa McKenzie	Nathan Stortroen
Christian Falyar	Derek Owens	Martha Vera
Einbar Hazan	Adeleke Oyemade	John Volk

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CHAIR Robyn Ward
Heather Bair
Garry Brydges

Alexandra Burkart
Deniz Dishman
Sara Gonzalez
Audrey Rosenblatt

Sarah Schnabel
Rhea Temmermand
Andy Tracy

NCE Item Writing Subcommittee

CHAIR Danilo Lovinaria
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Elizabeth Bamgbose
Zohn Centimole
Dana Flatley
Katie Helmrick

Nicolette Hooge
John Lauro
Marco Perez
Cora Rabe
Lauryn Rametta
Anne Sauri

Scott Shaffer
Robert Simon
Brittainy Stalvey
Rhea Temmermand
Regalado Valerio, Jr.

Differential Item Functioning (DIF) Panel

Israel Akpadiaha
Maureen Anderson
Melissa Ayala
Michael Beredo
Jose Castillo III

Unique Laylor
Johanna Newman
Esther Odeghe
Cynthia Sebring
Mark Sinniah

Ethan Smith
David Villanueva
Ramniwas Yadav

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CHAIR Sarah Veeneman
James Alberding
Gloria Chan
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Ashlee Ericksen
Kenneth Glover
Andrea Hargis
William Howie
Nicole Moore
Sara Myers

April Phillips
Donald Stafford
Bradley Stelflug
Mercedes Weir

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CPCA / MAC Check Professional Practice Analysis (PPA) Panel

Lukeythia Bastardi
Jennifer Belford
Andrew Benson
Kimyatta Brent
LaAnita Gillispie
Rupinder Girn

Jennifer Greenwood
Shannon Griffin
Jeremy Heiner
Steven Mbugua
Holly O'Brien-Avila
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Victor Pareja
Anne Remy
Trisha Vothang
Amy Yerdon

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CHAIR Emily Funk
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Kimyatta Brent
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Oluwatoyin Olaide Orunja
Kenneth Rogado
Joanne Rush
Patricia Sarcona
Jessica Szydlowski
Ann-Marie Whitney
Lindsey Wilson
Amy Yerdon

CPC Core Modules

John Borza
Michael Boytim
Carrie Bowman Dalley
Vincente Gonzalez
Jeremy Heiner
Mark A. Kossick

Jennifer Martin
Franklin McShane
Jessica Phillips
CDR Kennett Radford II
Nancy Sweet-Fitzgibbon
CDR Tiffany Uranga

Julia L. Walker
Kenneth Wofford
Young (John) Yauger
Sarah Jingying Zhang

NSPM Content Adaptation Panel

Brian Bielicki
Robert Bland, Jr.
Walter Brown
Nora Coast
Kyle Comin
Gram Cotton
Marina Cuk

Lina Dorfmeister
Joshua Dunlap
Dustin Gill
Robert Gonzalez, Jr.
Brian Jacobs
Gregory Kronenberg
Jose Ramirez

Jacqueline Rowles
Ryan Sportel
Shawn Tulp
Jason Werth
Steven Wooden

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