MISSION
AACN Certification Corporation drives patient health and safety through comprehensive credentialing of acute and critical care nurses ensuring practice consistent with standards of excellence.

VISION
All nurses caring for acutely and critically ill patients and their families are certified.

VALUES
As the Corporation advances its mission and vision to fulfill its purpose and inherent obligation of ensuring the health and safety of patients experiencing acute and critical illness, the Corporation is guided by a set of deeply rooted values:

- **Providing leadership** to bring all stakeholders together to create and foster cultures of excellence and innovation
- **Acting with integrity** and upholding ethical values and principles in all relationships and the provision of sound, fair and defensible credentialing programs
- **Committing to excellence** in credentialing programs by striving to exceed industry standards and expectations
- **Promoting leading edge, research-based credentialing programs** for all nurses who care for and influence the care of acutely and critically ill patients
- **Demonstrating stewardship** through fair and responsible management of resources and cost-effective business processes

ETHICS
AACN and AACN Certification Corporation consider the American Nurses Association (ANA) Code of Ethics for Nurses foundational for nursing practice, providing a framework for making ethical decisions and fulfilling responsibilities to the public, colleagues and the profession. AACN Certification Corporation’s mission of public protection supports a standard of excellence where certified nurses have a responsibility to read about, understand and act in a manner congruent with the ANA Code of Ethics for Nurses.

The following AACN Certification Corporation programs have been accredited by the National Commission for Certifying Agencies (NCCA), the accreditation arm of the Institute for Credentialing Excellence (ICE):

<table>
<thead>
<tr>
<th>Program</th>
<th>NCCA Accredited Program</th>
</tr>
</thead>
<tbody>
<tr>
<td>CCRN® (Adult)</td>
<td>PCCN®</td>
</tr>
<tr>
<td>CCRN® (Pediatric)</td>
<td>CMC®</td>
</tr>
<tr>
<td>CCRN® (Neonatal)</td>
<td>CSC®</td>
</tr>
<tr>
<td>CCRN-E™ (Adult)</td>
<td>ACNPC-AG®</td>
</tr>
<tr>
<td>CCRN® (Pediatric)</td>
<td>ACCNS-P®</td>
</tr>
<tr>
<td>CCRN® (Neonatal)</td>
<td>ACCNS-N®</td>
</tr>
</tbody>
</table>

Our advanced practice certification programs, ACCNS-AG, ACCNS-P, ACCNS-N and ACNPC-AG, meet the National Council of State Boards of Nursing (NCSBN) criteria for APRN certification programs.
As healthcare becomes increasingly complex and challenging, certification has emerged as a mark of excellence showing patients, employers and the public that a nurse possesses a defined body of knowledge and has met the rigorous requirements to achieve specialty and/or subspecialty certification.

AACN Certification Corporation programs were created to protect healthcare consumers by validating the knowledge of nurses who care for and/or influence the care delivered to the acutely and critically ill. We are pleased to provide you with this handbook with information about our programs and how to apply for and take the CMC certification exam.

Today, more than 115,000 practicing nurses hold one or more of these certifications from AACN Certification Corporation:

**Specialty Certifications**

- **CCRN®** is for nurses providing direct care to acutely/critically ill adult, pediatric or neonatal patients.
- **CCRN-K™** is for nurses who influence the care delivered to acutely/critically ill adult, pediatric or neonatal patients, but do not primarily or exclusively provide direct care.
- **CCRN-E™** is for nurses working in a tele-ICU monitoring/caring for acutely/critically ill adult patients from a remote location.
- **PCCN®** is for progressive care nurses providing direct care to acutely ill adult patients.
- **PCCN-K™** is for nurses who influence the care delivered to acutely ill adult patients, but do not primarily or exclusively provide direct care.

**Subspecialty Certifications**

- **CMC®** is for certified nurses providing direct care to acutely/critically ill adult cardiac patients.
- **CSC®** is for certified nurses providing direct care to acutely/critically ill adult patients during the first 48 hours after cardiac surgery.

**Advanced Practice Consensus Model-Based Certifications**

- **ACNPC-AG®** is for the adult-gerontology acute care nurse practitioner educated at the graduate level.
  
  The ACCNS credentials are for clinical nurse specialists educated at the graduate level to provide care across the continuum from wellness through acute care:
  - **ACCNS-AG®** is for the adult-gerontology clinical nurse specialists educated to care for adult-gerontology patients.
  - **ACCNS-P®** is for the pediatric clinical nurse specialists educated to care for pediatric patients.
  - **ACCNS-N®** is for the neonatal clinical nurse specialists educated to care for neonatal patients.

**Advanced Practice Certifications**

With implementation of the Consensus Model in 2015, ACNPC and CCNS are available as renewal options only:

- **ACNPC®** is for acute care nurse practitioners educated to provide care to adult patients.
- **CCNS®** is for acute/critical care clinical care specialists educated to provide care to adult, pediatric or neonatal patients.

We continually seek to provide quality certification programs that meet the changing needs of nurses and patients. Please visit www.aacn.org/certification, or call 800-899-2226 for more information about the above certifications.

Thank you for your commitment to patients and their families and to becoming certified.
CONTENTS

Certification Program ................................................................................................................................................................3
Exam Eligibility ...........................................................................................................................................................................4
Application Fees ........................................................................................................................................................................5
Application Process ...................................................................................................................................................................6
Certification Renewal .............................................................................................................................................................7-8
Test Plan ...............................................................................................................................................................................9-10
Sample Exam Questions .........................................................................................................................................................11
Exam Bibliography ...................................................................................................................................................................12
AACN Products for CMC Exam Preparation ...........................................................................................................................13

Forms:
CMC Exam Application (pages 1 and 2 of application) ...................................................................................................14-15
CMC Exam Honor Statement (page 3 of application) ...........................................................................................................16

The following information can be found in the Certification Exam Policy Handbook online at www.aacn.org/certhandbooks:

- AACN Certification Programs
- Name and Address Changes
- Confidentiality of Exam Application Status
- Testing Site Information
- Exam Scheduling and Cancellation
- On the Day of Your Exam
- Duplicate Score Reports
- Recognition of Certification
- Use of Credentials
- Denial of Certification
- Revocation of Certification
- Review and Appeal of Certification Eligibility

Please direct inquiries to:

AACN Certification Corporation, 101 Columbia, Aliso Viejo, CA 92656-4109
800-899-2226 • Fax: 949-362-2020 • certification@aacn.org

Please include your AACN customer number with all correspondence to AACN Certification Corporation.
CMC Certification Program

CMC® Registered Service Mark

CMC (Cardiac Medicine Certification) is a registered service mark and denotes certification in cardiac medicine nursing as granted by AACN Certification Corporation. Registered nurses who have not achieved CMC certification, whose CMC certification has lapsed, or whose clinical nursing specialty certification has lapsed or is inactive are not authorized to use the CMC credential.

Purpose and Rationale

CMC is a nursing subspecialty designed for specialty certified nurses who provide care for acutely/critically ill cardiac patients. Specialty nurses interested in this subspecialty certification may work in such areas as CCUs, medical ICUs, telemetry, progressive care, heart failure clinics/home care, interventional cardiology, cardiac cath labs and/or electrophysiology units.

The CMC exam is based on a study of practice, also known as a job analysis. The job analysis, conducted at least every five years, validates the knowledge, skills and abilities required for safe and effective practice as an RN or APRN in direct care of acutely/critically ill adult cardiac patients.

The test plan, which provides an outline of exam content, is developed by an expert CMC panel based on the results of the study of practice. The organizing framework for all AACN Certification Corporation exams is the AACN Synergy Model for Patient Care™, with CMC focusing exclusively on the clinical judgment component. A current clinical nursing specialty certification is required to ensure key nursing competencies of professional caring and ethical practice as outlined in the Synergy Model for Patient Care have been tested.

Clinical practice requirements have been validated by subject matter experts. The required hours of clinical practice correspond to the third stage of competence in Benner’s Stages of Clinical Competence. CMC certification denotes to the public those practitioners who possess a distinct and clearly defined body of knowledge called cardiac nursing.

CMC Exam Content

The CMC exam is a 2-hour test consisting of 90 multiple-choice items. Of the 90 items, 75 are scored and 15 are used to gather statistical data on item performance for future exams. The content of the CMC exam is described in the test plan. The CMC exam focuses on the adult patient population. One hundred percent (100%) of the exam focuses on clinical judgment.

CMC Test Plan

Candidates are tested on a variety of patient care problems that are organized under major categories on the CMC Test Plan. Refer to the test plan on pages 9 and 10 for more information. Please note the percentage of the CMC exam devoted to each category.

Passing Point/Cut Score

A criterion-referenced standard setting process, known as the modified Angoff, is used to establish the passing point/cut score for the exam. Each candidate’s performance on the exam is measured against a predetermined standard.

The passing point/cut score for the exam is established using a panel of subject matter experts, an exam development committee (EDC), who carefully reviews each exam question to determine the basic level of knowledge or skill that is expected. The passing point/cut score is based on the panel’s established difficulty ratings for each exam question.

Under the guidance of a psychometrician, the panel develops and recommends the passing point/cut score, which is reviewed and approved by AACN Certification Corporation. The passing point/cut score for the exam is established to identify individuals with an acceptable level of knowledge and skill. All individuals with a score equal to or above the passing point/cut score have demonstrated an acceptable level of knowledge.
CMC EXAM ELIGIBILITY

Licensure
Current, unencumbered U.S.* RN or APRN license is required.

- An unencumbered license is not currently being subjected to formal discipline by any state board of nursing and has no provisions or conditions that limit the nurse’s practice in any way. This applies to all RN or APRN licenses you currently hold.
- If selected for audit, you will be asked to provide a copy of your RN or APRN license.
- Candidates and CMC-certified nurses must notify AACN Certification Corporation within 30 days if any restriction is placed on their RN or APRN license(s).

Practice
Candidates must meet one of the following clinical practice requirement options:

- Practice as an RN or APRN for 1,750 hours in direct care of acutely/critically ill adult patients during the previous 2 years, with 875 of those hours accrued in the most recent year preceding application. Of those 1,750 hours, 875 need to be in the care of acutely/critically ill adult cardiac patients.
  
  OR

- Practice as an RN or APRN for at least 5 years with a minimum of 2,000 hours in the care of acutely/critically ill adult patients, with 144 of those hours accrued in the most recent year preceding application. Of those 2,000 hours, 1,000 need to be in the care of acutely/critically ill adult cardiac patients.

Orientation hours spent shadowing/working with another nurse who is the one with the patient assignment cannot be counted toward clinical hours for CMC eligibility; however, orientation hours during which you are the assigned nurse providing direct care to acutely/critically ill adult cardiac patients may be counted.

Practice hours for the CMC exam or renewal eligibility must be completed in a U.S.-based* or Canada-based facility or in a facility determined to be comparable to the U.S. standard of acute/critical care nursing practice as evidenced by Magnet® designation or Joint Commission International accreditation.

Nurses serving as manager, educator (in-service or academic), APRN or preceptor may apply their hours spent supervising nursing students or nurses at the bedside.

- Nurses in these roles must be actively involved in caring for cardiac and/or cardiac surgery patients; for example, demonstrating how to measure pulmonary artery pressures or supervising a new employee or student nurse performing a procedure.

Certification
A current clinical nursing specialty certification, to which the CMC credential will be attached, is required. The clinical nursing specialty certification must:

- involve direct care of adult patients, and
- be nationally accredited by the NCCA (National Commission for Certifying Agencies) or the ABSNC (American Board of Specialty Nursing Certification), and
- test beyond clinical judgment to include key nursing competencies of professional caring and ethical practice as outlined in the Synergy Model for Patient Care.

Examples of acceptable clinical nursing certifications include, but are not limited to, CCRN, CCRN-E, PCCN, ACNPC, ACNPC-AG, CCNS, ACCNS-AG, CMSRN, CEN, etc.

Practice Verification
The name and contact information of a professional associate must be given for verification of eligibility related to clinical practice hours. If you are selected for audit, this associate will need to verify in writing that you have met the clinical hour requirements.

- A professional associate is defined as your clinical supervisor or a colleague (RN or physician) with whom you work.

AACN Certification Corporation may adopt additional eligibility requirements at its sole discretion. Any such requirements will be designed to establish, for purposes of CMC certification, the adequacy of a candidate’s knowledge in care of the acutely/critically ill.

*Includes District of Columbia and U.S. territories of Guam, Virgin Islands, American Samoa and Northern Mariana Islands.
## APPLICATION FEES

<table>
<thead>
<tr>
<th></th>
<th>AACN Members</th>
<th>Nonmembers</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>CMC Computer-Based Exam</strong></td>
<td>$130</td>
<td>$215</td>
</tr>
<tr>
<td><strong>CMC Retest</strong></td>
<td>$110</td>
<td>$155</td>
</tr>
<tr>
<td><strong>CMC Renewal by Exam</strong></td>
<td>$110</td>
<td>$155</td>
</tr>
</tbody>
</table>

Payable in U.S. funds. Fees are subject to change without notice. A $15 fee will be charged for a returned check.

Computer-based testing discounts are available for groups of **10 or more** candidates submitting their AACN certification exam applications in the same envelope. Employers may pre-purchase exam vouchers at a further discounted rate.

For details about Group and Value Program Discounts, visit www.aacn.org/certification > Explore Certification Volume Discounts, email certification@aacn.org or call 800-899-2226.
ONLINE APPLICATION PROCESS

- Register online for computer-based testing at www.aacn.org/certification > Get Certified

Before you get started, have available the following:
- RN or APRN license number and expiration date
- Name, address, phone and email address of your clinical supervisor or a professional associate (RN or physician) who can verify your practice eligibility
- Credit card (Visa, MasterCard, Discover or American Express)

- Same day processing
  If your specialty certification is not from AACN, submit proof of current nationally clinical nursing specialty certification within 10 days.

Paper applications are required for those applying with a group, for paper and pencil exams and for testing outside the U.S.

- Complete the application on pages 14-15 and honor statement on page 16
  - Fill in all requested information including that for your RN or APRN license
  - If your specialty certification is not from AACN, submit proof of current nationally accredited clinical nursing specialty certification.

- Include application fee
  - Credit card, check or money order

- Allow 2 to 3 weeks for processing

---

Use your legal name on the application.
This name must match photo identification used for exam entry and will be the name printed on your certificate.

1. Receive notice of processed application
   - AACN will send you an email confirming that you have successfully applied to take the CMC exam.

2. Receive approval-to-test email
   - AACN’s testing service (PSI/AMP) will send an email and mail a postcard to eligible candidates within 5 to 10 days after confirmation email that will include:
     - A toll-free number and online instructions to schedule your testing appointment
     - The 90-day period during which you must schedule and take the exam
     - Your exam identification number, which is your unique AACN customer number preceded by the letter “C” (e.g., C00123456).
   - If you do not receive an email or postcard from PSI/AMP within 2 weeks of receiving confirmation email, please contact AACN Customer Care at 800-899-2226.

3. Schedule the exam
   - Upon receipt of PSI/AMP’s email or postcard:
     - Confirm that you are scheduled for the correct certification exam
     - Promptly schedule your exam appointment for a date and time that falls within your 90-day testing window.
   - Testing is offered twice daily, Monday through Friday, at 9 a.m. and 1:30 p.m. Saturday appointments are available at most locations.
   - To locate one of the more than 300 PSI/AMP testing centers within the U.S., visit www.goAMP.com.

4. Sit for the exam
   - Upon completion of computer-based exams, results with a score breakdown will be presented on-site.
   - Results of paper and pencil exams will be mailed to candidates 3 to 4 weeks following paper testing.
   - Successful candidates will receive their wall certificate within 3 to 4 weeks of passing the exam.

---

Please ensure that AACN has your current contact information on record.
Updates may be made online at www.aacn.org/myaccount or emailed to info@aacn.org.
For name changes, please call AACN Customer Care at 800-899-2226.
Purpose and Limitations of Renewal Options

The purpose of certification renewal is to promote continued competence. The renewal process helps to maintain an up-to-date knowledge base through continuing education and practice hours, or practice hours and passing the certification exam.

Following are the limitations to the components of the renewal options:

- CE/CERP limitations include content quality and relevance to practice as well as an individual's ability to self-select CE/CERPs most pertinent to the individual's practice and educational needs.
- Limitations of practice hours include the quality of the practice environment and limitations on learning opportunities.
- One limitation of the exam is not assessing new competencies, as exam competencies were validated through initial certification.

Requiring two components for renewal, rather than one, decreases the limitations and furthers the goal of continued competence.

Renewal Period

CMC certification is granted for a period of 3 years. Your certification period begins the first day of the month in which the CMC exam is passed and ends 3 years later; for example, July 1, 2017 through June 30, 2020. The purpose of certification renewal is to support continued competence.

Renewal notifications will be mailed and/or emailed to you starting 4 months before your scheduled CMC renewal date. You are responsible for renewing your certification even if you do not receive renewal notification.

Eligibility

Candidates for CMC renewal must meet the following requirements:

- Current, unencumbered U.S.* RN or APRN license that was not subjected to formal discipline by any state board of nursing during the 3-year certification renewal period
- Current clinical nursing specialty certification meeting all of the following criteria:
  - involves direct care of adult patients, and
  - is nationally accredited by the NCCA (National Commission for Certifying Agencies) or the ABSNC (American Board for Specialty Nursing Certification), and
  - tests beyond clinical judgment to include key nursing competencies of professional caring and ethical practice as outlined in the Synergy Model for Patient Care.
- Completion of 432 clinical practice hours caring for acutely/critically ill adult cardiac patients as an RN or APRN within the 3-year period preceding your scheduled renewal date, with 144 of those hours accrued in the most recent year preceding your scheduled renewal date
- Completion of the required CERPs or take/pass the CMC exam

*Includes District of Columbia and U.S. territories of Guam, Virgin Islands, American Samoa and Northern Mariana Islands.

continued
Renewal Options
You may seek certification renewal via Renewal by CERPs or Renewal by Exam, or apply for Inactive Status. Do not apply for more than one option.

Renewal is available to all active certificants as early as 4 months prior to their scheduled renewal date. Visit www.aacn.org/certification > Renew Certification.

Option 1 - Renewal by CERPs
• Complete 25 Category A Clinical Judgment CERPs pertaining to cardiology (includes all items on the CMC Test Plan) during the 3-year certification renewal period.

Option 2 - Renewal by Exam
• Meet the eligibility requirements for CMC renewal and successfully apply for and schedule your exam.
• The CMC exam must be completed before your scheduled renewal date. You may not take the exam early, then attempt to renew by CERPs if you do not pass.

Option 3 - Inactive Status
• Inactive status is available to CMC-certified nurses who do not meet the renewal eligibility requirements but do not wish to lose their CMC certification status. Inactive status provides additional time, up to 3 years from the scheduled renewal date, to meet the renewal eligibility requirements.
• During the time of Inactive status, the CMC credential may not be used.
• Inactive status may be held more than once, but not for two consecutive renewal periods.

For more details, refer to the CMC Renewal Handbook available at www.aacn.org/certhandbooks.
I. CARDIOVASCULAR PATIENT CARE PROBLEMS (43%)

A. Acute Coronary Syndrome
   1. Non-ST segment elevation myocardial infarction
   2. ST segment elevation myocardial infarction
   3. Unstable angina

B. Dysrythmias
   1. Bradycardia
   2. Conduction defects and blocks
   3. Pulseless rhythms
   4. Tachydyshyrrhythmias

C. Heart Failure
   1. Acute exacerbation
   2. Chronic
   3. Etiology of heart failure
      a. left
      b. right
      c. diastolic (i.e., preserved left ventricular function)
      d. systolic (i.e., reduced left ventricular function)

D. Other Cardiac Issues and Complications
   1. Cardiac tamponade
   2. Cardiogenic shock
   3. Cardiomyopathy
      a. dilated (e.g., ischemic/nonischemic)
      b. hypertrophic
      c. restrictive
      d. stress-induced (e.g., takotsubo)
   4. Hyperlipidemia
   5. Hypertension
      a. chronic
      b. hypertensive crisis (e.g., urgency, emergency)
   6. Inflammatory and infectious conditions
      a. endocarditis
      b. myocarditis
      c. pericarditis
   7. Papillary muscle rupture
   8. Pericardial effusion
   9. Pulmonary edema (cardiogenic and non-cardiogenic)
   10. Sudden cardiac death

II. OTHER PATIENT CARE PROBLEMS (19%)

A. Pulmonary
   1. Acute pulmonary embolus
   2. Acute respiratory distress syndrome (ARDS)
   3. Acute respiratory failure
   4. Hemothorax
   5. Pneumothorax
   6. Pulmonary hypertension
      a. primary
      b. secondary (e.g., valvular disease, COPD, acute hypoxemia defects)
      c. cor pulmonale
   7. Sleep apnea

B. Endocrine
   1. Diabetes mellitus
   2. Metabolic syndrome
   3. Thyroid disorders

C. Hematology/Immunology
   1. Anemia
   2. Coagulopathies
      a. heparin-induced thrombocytopenia
      b. platelet inhibition
      c. anticoagulation
   3. Hypercoagulable state

D. Neurology
   1. Hemorrhagic stroke
   2. Ischemic events (e.g., thromboembolic stroke, TIA)
E. Renal
1. Acute kidney injury
2. Chronic kidney disease
3. Contrast-induced nephropathy
4. Electrolyte imbalances (e.g., potassium, sodium, phosphorus, magnesium, calcium)

F. Multisystem
1. Multi-organ dysfunction syndrome (MODS)
2. Noncardiac chest pain (e.g., gastrointestinal, musculoskeletal)
3. Shock (e.g., hypovolemic, obstructive, distributive)
4. Sepsis

G. Behavioral
1. Substance abuse (e.g., illicit drugs, alcohol, nicotine)
2. Substance withdrawal

III. THERAPEUTIC INTERVENTIONS (23%)
A. Cardiovascular
1. Assist devices – Intra-aortic balloon pump
2. Cardiac and vascular procedures
   a. carotid angiography and stenting
   b. catheter-directed thrombolysis
   c. endovascular grafts
   d. left-sided heart catheterization
   e. percutaneous coronary intervention (PCI) and stents
   f. pericardiocentesis
   g. peripheral angiography and stenting
   h. right-sided heart catheterization
3. Cardiovascular pharmacology
   a. acute coronary syndrome
   b. dysrhythmias
   c. heart failure
   d. hypertension
   e. shock
   f. stroke and TIA
4. Electrophysiologic interventions
   a. pacemakers
      (1) cardiac resynchronization therapy (e.g., biventricular)
      (2) permanent (e.g., dual, single chamber)
      (3) temporary (e.g., transcutaneous, transvenous)
   b. other electrophysiologic interventions
      (1) ablation
      (2) cardioversion
      (3) defibrillation
      (4) external wearable cardioverter defibrillator
      (5) implantable cardioverter defibrillator (e.g., AICD, ICD)

B. Pulmonary
1. Mechanical ventilation
2. Noninvasive positive pressure ventilation (e.g., CPAP)

C. Renal
1. Hemodialysis

D. Multisystem
1. Fluid management (e.g., hemodynamics)
2. Palliative care
3. Therapeutic hypothermia

IV. MONITORING AND DIAGNOSTICS (16%)
A. Cardiovascular
1. Blood studies (e.g., cardiac enzymes, electrolytes, BNP, creatinine)
2. ECG interpretation
   a. continuous QT interval
   b. continuous ST segment
   c. rhythm recognition
   d. 12-lead ECG
3. Echocardiography
   a. transesophageal
   b. transthoracic
4. Invasive hemodynamic monitoring
   a. CVP
   b. pulmonary artery catheter
   c. SvO₂
5. Stress testing (pre- and post-management)
   a. exercise
   b. pharmacologic

B. Pulmonary
1. ABGs
2. End-tidal CO₂ (ETCO₂)
3. Mixed venous gases
4. Pulse oximetry

The sum of these percentages is not 100 due to rounding. Order of content does not necessarily reflect importance.
CMC SAMPLE QUESTIONS
The purpose of the sample questions is to familiarize candidates with the style and format of the certification exam items.

1. One week after an ST segment elevation MI, a patient develops a holosystolic murmur and thrill with the following data:
   BP     80/50
   CVP    30 mm Hg
   PAP    70/40 mm Hg
   PAOP   35 mm Hg
   CO     1.2 L/min

   The most likely cause of these symptoms is
   A. papillary muscle rupture.
   B. ventricular septal defect.
   C. acute pericarditis.
   D. ventricular aneurysm.

2. A patient with end-stage right sided heart failure becomes increasingly agitated and confused. The HR is 110, RR 22, SpO₂ 95% on 3 L O₂ via NC. Bilateral breath sounds are clear. Which of the following should the nurse do next?
   A. obtain an order for furosemide (Lasix)
   B. administer a PRN sedative
   C. draw a serum ammonia level
   D. anticipate placement of a pulmonary artery catheter

3. A 17-year-old is being evaluated for severe chest pain. The nurse should provide a targeted assessment for the use of
   A. marijuana as it depresses the myocardium.
   B. cocaine as it induces coronary artery vasospasm.
   C. tobacco as nicotine decreases myocardial perfusion.
   D. methamphetamine which block endogenous dopamine release.

4. A patient is to receive therapeutic hypothermia following cardiac arrest. The nurse should
   A. apply treatment within 2 hours of resuscitation and cool to 91.4 °F (33 °C).
   B. monitor temperature every 30 minutes and cool to 89.6 °F (32 °C).
   C. check temperature every hour and cool for a minimum of 48 hours.
   D. initiate treatment within 4 hours and monitor with an esophageal thermometer.

5. To best reduce the risk of contrast induced nephropathy in a patient with renal insufficiency, the nurse should anticipate an order for
   A. furosemide (Lasix).
   B. 0.9% sodium chloride.
   C. n-acetylcysteine (Mucomyst).
   D. dopamine (Intropin).

6. A patient develops a coagulopathy related to the administration of abciximab (ReoPro). The nurse should anticipate administering
   A. DDAVP
   B. protamine sulfate
   C. vitamin K
   D. platelets

7. The discharge education plan for a patient following percutaneous coronary intervention with stent placement for an acute myocardial infarction should include
   A. clopidogrel (Plavix), metoprolol (Lopressor) and aspirin.
   B. enalapril (Vasotec), sublingual nitroglycerin (Nitrostat) and metoprolol (Lopressor)
   C. enoxaparin (Lovenox), aspirin, and statin therapy
   D. calcium channel-blocker, aspirin, and sublingual nitroglycerin (Nitrostat)

8. A patient presents with sternal chest pressure, shortness of breath and nausea. The 12-lead ECG is normal and the troponin level is elevated. The patient is most likely experiencing
   A. a STEMI.
   B. an N-STEMI.
   C. unstable angina.
   D. a pulmonary embolus.

Answers:
1. A 5. B
2. C 6. D
3. B 7. A


Jaski BE. The 4 Stages of Heart Failure. Minneapolis, MN: Cardiotext; 2015.


Many references are available through AACN; visit www.aacn.org > Store.

More current versions may be available.

PUBLISHER CONTACTS:
American Heart Association – 800-242-8721
Cardiovascular Nursing Education Associates – 206-403-3486
Cardiotext Publishing – 800-999-9174
Elsevier (including Mosby, W. B. Saunders and Hanley & Belfus) – 800-545-2522
Jones & Bartlett – 800-832-0034
Lippincott Williams & Wilkins – 800-638-3030
McGraw-Hill – 877-833-5524
Springer Publishing – 877-687-7476
## AAN PRODUCTS FOR CMC EXAM PREPARATION

AACN Certification Corporation does not participate in the development of AACN products and does not approve, endorse or recommend any specific exam preparation products.

<table>
<thead>
<tr>
<th>Product Title/Description</th>
<th>AACN Product #</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Online</strong> CMC Certification Review Course: Individual Purchase. 2017.</td>
<td>CMCODCNEA</td>
</tr>
<tr>
<td>* Practice CMC Exam Questions. 2016. 100 questions with answers and rationales.</td>
<td>200505</td>
</tr>
<tr>
<td>Hemodynamic Monitoring: Evolving Technologies and Clinical Practice. 2016. Lough ME. 800 pages.</td>
<td>128646</td>
</tr>
</tbody>
</table>

* Denotes products developed by AACN Certification Corporation.

For more details and to place an order, visit [www.aacn.org > Store](http://www.aacn.org), or call AACN Customer Care at 800-899-2226, Monday through Friday between 7:30 a.m. and 4:30 p.m., Pacific Time.
CMC EXAM APPLICATION

1. REGISTRATION INFORMATION
   PLEASE PRINT CLEARLY. PROCESSING WILL BE DELAYED IF INCOMPLETE OR NOT LEGIBLE.
   LEGAL NAME AS IT APPEARS ON YOUR GOVERNMENT-ISSUED ID CARD IS REQUIRED FOR EXAM.

<table>
<thead>
<tr>
<th>AACN CUSTOMER:</th>
<th>RN/APRN LICENSE:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number</td>
<td>Exp. Date</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

LEGAL NAME:
Last First MI Maiden

HOME ADDRESS:
City State ZIP

EMAIL: HOME PHONE:

EMPLOYER NAME: BUSINESS PHONE:

EMPLOYER ADDRESS:
City State ZIP

2. AACN MEMBERSHIP
I would also like to join/renew/extend my AACN membership at this time and select member pricing for my exam fees:
(check one box only)

☐ 1-year AACN membership.............................................................$78
☐ 2-year AACN membership.............................................................$148
☐ 3-year AACN membership.............................................................$200

AACN membership includes nonrefundable $12 and $15 one-year subscriptions to Critical Care Nurse® and the American Journal of Critical Care®, respectively. AACN dues are not deductible as charitable contributions for tax purposes, but may be deducted as a business expense in keeping with Internal Revenue Service regulations.

Member exam fee ($130) + 1-year Membership ($78) = Savings of $7 over Nonmember fee

3. EXAM FEE

<table>
<thead>
<tr>
<th>CMC Adult</th>
<th>Initial Exam Fee</th>
<th>Retest Fee</th>
</tr>
</thead>
<tbody>
<tr>
<td>AACN Member</td>
<td>Nonmember</td>
<td>AACN Member</td>
</tr>
<tr>
<td>Check one box only</td>
<td>☐ $130</td>
<td>☐ $215</td>
</tr>
</tbody>
</table>

☐ Check this box if you’ve attached a request and supporting documentation for special testing accommodations.

4. PAYMENT INFORMATION - application must be accompanied by payment
☐ Check or money order attached – payable to AACN Certification Corporation. U.S. funds only.
Bill my credit card ☐ Visa ☐ MasterCard ☐ American Express ☐ Discover Card
Credit Card #: Exp. Date (mm/yy)

Name on Card ___________________________ Signature ___________________________

Amount Billed $_____________ Address of Payor (if different than applicant) ___________________________

☐ Please do not include my name on lists sold to other organizations.

Please complete pages 2 & 3 of application.

This application form may be photocopied and is also available at www.aacn.org/certification.
CMC EXAM APPLICATION

NAME: AACN CUSTOMER #:     

5. DEMOGRAPHIC INFORMATION
Check one box in each category. Information used for statistical purposes and may be used in eligibility determination.

Primary Area Employed
☐ Acute Hemodialysis Unit (21)
☐ Burn Unit (13)
☐ Cardiac Rehabilitation (26)
☐ Cardiac Surgery/OR (36)
☐ Cardiovascular/Surgical ICU (09)
☐ Catheterization Lab (22)
☐ Combined Adult/Ped. ICU (23)
☐ Combined ICU/CCU (01)
☐ Coronary Care Unit (03)
☐ Corporate Industry (24)
☐ Crit. Care Transport/Flight (17)
☐ Direct Observation Unit (39)
☐ Emergency Dept. (12)
☐ General Med./Surg. Floor (18)
☐ Home Care (25)
☐ Intensive Care Unit (02)
☐ Interventional Cardiology (31)
☐ Long-Term Acute Care (27)
☐ Medical Cardiology (34)
☐ Medical ICU (04)
☐ Medical Surgical ICU (35)
☐ Neonatal ICU (06)
☐ Neuro./Neurosurgical ICU (10)
☐ Oncology Unit (19)
☐ Operating Room (15)
☐ Outpatient Clinic (29)
☐ Pediatric ICU (05)
☐ Private Practice (32)
☐ Progressive Care Unit (16)
☐ Recovery Room/PACU (14)
☐ Respiratory ICU (08)
☐ Stepdown Unit (30)
☐ Subacute Care (28)
☐ Surgical ICU (07)
☐ Tele-ICU (37)
☐ Telemetry (20)
☐ Trauma Unit (11)
☐ Other – specify below (99)

Primary Position Held
☐ Academic Faculty (07)
☐ Acute Care Nurse Practitioner (09)
☐ Bedside/Staff Nurse (01)
☐ Case Manager (39)
☐ Charge Nurse (45)
☐ Clinical Coordinator (44)
☐ Clinical Director (04)
☐ Clinical Nurse Specialist (08)
☐ Corporate/Industry (11)
☐ Hospital Administrator (38)
☐ Internist (37)
☐ Legal Nurse Consultant (47)
☐ Manager (03)
☐ Nurse Anesthetist (02)
☐ Nurse Educator (46)
☐ Nurse Midwife (13)
☐ Nurse Practitioner (05)
☐ Outcomes Manager (42)
☐ Physician (16)
☐ Physician Assistant (17)
☐ Researcher (18)
☐ Respiratory Therapist (19)
☐ Technician (21)
☐ Unit Coordinator (22)
☐ Other - specify below (99)

Highest Nursing Degree
☐ Associate’s Degree
☐ Bachelor’s Degree
☐ Diploma
☐ Doctorate
☐ Master’s Degree
☐ Other – specify below (99)

Ethnicity
☐ African American (02)
☐ Asian (05)
☐ Hispanic (03)
☐ Native American (04)
☐ Pacific Islander (06)
☐ White/Non-Hispanic (01)
☐ Other – specify below (99)

Primary Type of Facility in Which Employed
☐ College/University (08)
☐ Community Hospital (Nonprofit) (01)
☐ Community Hospital (Profit) (02)
☐ Corporate/Industry (11)
☐ County Hospital (07)
☐ Federal Hospital (05)
☐ HMO/Managed Care (12)
☐ Home Health (13)
☐ Long-Term Acute Care Hosp. (16)
☐ Military/Government Hospital (04)
☐ Non-Academic Teaching Hosp. (14)
☐ Registry (10)
☐ Self-Employed (09)
☐ State Hospital (06)
☐ Travel Nurse (15)
☐ University Med. Ctr. (03)
☐ Other – specify below (99)

Number of Beds in Institution:

Years of Experience in Nursing:

Years of Experience in Acute/Critical Care Nursing:

Date of Birth: (mm/dd/yy)

Gender: ☐ Female ☐ Male

6. HONOR STATEMENT
Complete the Honor Statement on page 16.

7. SUBMIT APPLICATION
Attach Honor Statement to this application and submit with payment to:
AACN Certification Corporation
101 Columbia
Aliso Viejo, CA 92656-4109
or fax to: 949-362-2020

DO NOT mail AND fax your application - please choose only ONE method.

NOTE: Allow 2 to 3 weeks from the date received by AACN Certification Corporation for application processing.

Questions? Please visit www.aacn.org/certification, email certification@aacn.org or call us at 800-899-2226.

Please complete page 3 of application (honor statement).
CMC EXAM HONOR STATEMENT
PROCESSING WILL BE DELAYED IF INCOMPLETE OR NOT LEGIBLE.

NAME: 

AACN CUSTOMER #: 

Last First MI

I hereby apply for the CMC subspecialty certification exam. Submission of this application indicates I have read and understand the exam policies and eligibility requirements as documented in the CMC Exam Handbook and the Certification Exam Policy Handbook.

LICENSURE: I possess a current, unencumbered U.S. RN or APRN license. My ___________________________ (state) nursing license ___________________________ (number) is due to expire ___________________________ (date).

An unencumbered license is not currently being subjected to formal discipline by any state board of nursing and has no provisions or conditions that limit my practice in any way. This applies to all RN or APRN licenses I currently hold. I understand that I must notify AACN Certification Corporation within 30 days if any disciplinary action is taken against my RN or APRN license(s) in the future.

CLINICAL NURSING SPECIALTY CERTIFICATION: I hold a current clinical nursing specialty certification that meets AACN’s criteria, which includes but is not limited to being nationally-accredited (NCCA or ABSNC). If my specialty certification is conferred by an organization other than AACN Certification Corporation, I agree to submit proof of my certification with this application. I understand that I must notify AACN if my specialty certification lapses.

To which clinical nursing specialty certification would you like to tie your subspecialty certification? (check one only)

☐ CCRN  ☐ CCRN-E  ☐ PCCN  ☐ ACNPC  ☐ ACNPC-AG  ☐ CCNS  ☐ ACCNS-AG  ☐ Other ____________

Attach proof of non-AACN certification, such as copy of wallet card or wall certificate, or verification letter from certifying organization; must be valid for 90 days beyond CMC application date.

PRACTICE: I have fulfilled one of the following clinical practice requirement options:

- Practice as an RN or APRN for 1,750 hours in direct care of acutely/critically ill adult patients during the past 2 years, with 875 of those hours accrued in the most recent year preceding application. Of those 1,750 hours, 875 were in the care of adult cardiac patients.

- Practice as an RN or APRN for at least 5 years with a minimum of 2,000 hours in direct care of acutely/critically ill adult patients, with 144 of those hours accrued in the most recent year preceding application. Of those 2,000 hours, 1,000 were in the care of adult cardiac patients.

Hours were completed in a U.S.-based or Canada-based facility or in a facility determined to be comparable to the U.S. standard of acute/critical care nursing practice as evidenced by Magnet® designation or Joint Commission International accreditation.

PRACTICE VERIFICATION: Following is the contact information of my clinical supervisor or a professional colleague (RN or physician) who can verify that I have met the clinical hour requirements:

VERIFIER’S NAME: FACILITY NAME:

Last First

VERIFIER’S PHONE NUMBER: VERIFIER’S EMAIL ADDRESS:

You may not list yourself or a relative as your verifier.

AUDIT: I understand that my certification application is subject to audit, and failure to respond to or pass an audit will result in revocation of certification.

ETHICS: I understand the importance of ethical standards and agree to act in a manner congruent with the ANA Code of Ethics for Nurses.

NON-DISCLOSURE OF EXAM CONTENT: Submission of this application indicates my agreement to keep the contents of the exam confidential and not disclose or discuss specific exam content with anyone except AACN Certification Corporation. Per AACN Certification Corporation policy, sharing of exam content is cause for revocation of certification.

To the best of my knowledge, the information contained in this application is accurate and submitted in good faith. My signature below indicates I have read this honor statement and meet the eligibility requirements as outlined.

Applicant’s Signature: Date: