



MEDICAL WRITING CERTIFICATION EXAMINATION APPLICANT AND CANDIDATE HANDBOOK

For questions about the Medical Writing
Certification Examination, contact
Medical Writing Certification Commission
American Medical Writers Association (AMWA)

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www.amwa.org/mwc

July 2024

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About the Medical Writing Certification Program

Established by the American Medical Writers Association (AMWA), the Medical Writing Certification Commission (hereafter the Commission) is responsible for developing and overseeing a credentialing program for professional medical writers. AMWA and the Commission created the certification program to advance medical writing as a professional discipline by identifying and testing the knowledge, skills, and abilities (KSAs) that are essential to this type of work and by encouraging continued professional growth of medical writers. The certification program was developed in a deliberate and evidence-based manner, with input from individuals with a broad range of medical writing backgrounds and specialties. To learn more about the program, visit www.amwa.org/mwc.

About the Medical Writer Certified Credential

The Medical Writer Certified (MWC®) credential is awarded by the Commission to medical writers who pass the Medical Writing Certification Examination (hereafter the exam).

Certification is voluntary and is not required for a medical writer to be employed in the field, but it offers many advantages.

The results of the exam are not intended to predict how well an individual may perform as a medical writer or to assess the relative level of that person's medical writing skill or ability. However, the results can provide insight into that person's level of knowledge in core content areas specific to medical writing. Therefore, some employers may consider certification in hiring decisions, job promotions, salary increases, recognition, or other considerations. In addition,



certification will allow employers and clients to identify competency areas and in the field; as a result, companies may be encouraged to promote professional development and, thus, improve the competency of their employees.

Why Become Certified?

By obtaining the MWC credential, medical writers not only enhance their professional credibility but also give an employer or client increased confidence in their knowledge in core content areas specific to medical writing, as certified by a third party. Certification also shows a high degree of commitment to continued professional development in the field of medical writing. Those who earn the MWC credential are required to adhere to a code of ethics and professional standards. These factors may increase an individual's marketability and opportunities for career advancement and higher earnings. Also important is the personal satisfaction medical writers can derive from passing the exam and earning the MWC credential.

Applicant Eligibility Requirements

The Commission provides equal opportunity to all applicants without regard to race, color, religion, age, sex, national origin, sexual orientation, physical or mental disability, veteran status, or other legally protected categories.

To apply for the exam, individuals must have the following qualifications:

- A bachelor's degree in any field of study.
- A minimum of 2 years of full-time work experience or equivalent (eg, 4 years of documented part-time work at 20 hours/week) within the past 5 years. Experience must be in a paid capacity in the field of medical writing.

Exceptions to the requirement for a bachelor's

degree may be granted for individuals with at least 5 full-time years (or equivalent) of verifiable work experience in medical writing. Experience must have been in a paid capacity within the past 10 years.

For a more detailed explanation of what activities constitute 2 years of paid medical writing experience including examples, see [Appendix 1](#).

Application Process

1. Complete the [application form](#).
2. Provide a current resume or curriculum vitae with a short description of duties carried out in each job position.
3. Provide an official university transcript, preferably an electronic version directly from the university to certification@amwa.org. An official transcript in its original envelope is also acceptable. If the transcript is not in English, provide an English translation for Commission review.
4. Provide 2 letters of reference from individuals who can document previous or current relevant medical writing work experience. Please give the [Request Form for Letter of Reference](#) to each person providing a reference. This form may be found on the certification website (www.amwa.org/mwc). Reference letters should
 - be addressed to the Commission.
 - be written on official letterhead. If official letterhead is unavailable, the company or institution name and the referring person's name and title must be provided with contact information.
 - include a current phone number and email address of the person providing the reference in case they need to be contacted.
 - describe the applicant's medical writing duties and responsibilities.

- attest to the applicant's knowledge, skills, abilities, and experience in medical writing.
 - attest to the applicant's required years of experience in medical communications (at least 2 years of full-time work experience or equivalent in a paid capacity).
 - be dated, signed, and provided in PDF.
 - be written no earlier than 6 months before the date of the applicant's application. Out-of-date reference letters will not be accepted.
5. Answer background questions regarding any professional disciplinary proceedings. If applicants answer affirmatively to any of the background questions, their application will be subject to review by the Ethics and Appeals Committee of the Commission.
 6. Read the *Adapted AMWA Code of Ethics* and the *Terms and Conditions of Certification* that are included in the application form. By signing the application, the applicant agrees to abide by these documents.
 7. Pay the required application fee online through AMWA's website (www.amwa.org/mwc). Applicants who have been denied eligibility to take the exam may request a refund of the MWC application submission fee, less a \$75 administrative fee.

All application materials must be sent to certification@amwa.org in a single email. All submitted materials become the property of the Commission. Once the submitted materials have been reviewed, the applicant will be notified regarding eligibility status.

If eligible: Within approximately 20 business days after receipt of materials by AMWA, applicants will receive an email notice of candidacy, along with instructions for registering for the exam.

If not eligible: Within approximately 20 business days after receipt of materials by AMWA,

applicants will receive an email notice of ineligibility, along with the reasons for the denial.

Once an applicant's eligibility to sit for the exam has been approved, the exam must be taken and passed within 2 years from the date of acceptance into candidacy. There are 2 time periods for taking the exam each year. Eligible candidates will be contacted by AMWA at the beginning of the registration period for each exam time period until either they pass the exam or their eligibility expires.

Applicants must pay a registration fee for each exam attempted. If the exam is not taken and passed within 2 years from the application receipt date, the person must submit a new application and meet the eligibility requirements in effect for the new application date.

Denial of Eligibility

Eligibility to take the Medical Writing Certification exam will be denied if any of the following conditions are present when an application is received at AMWA headquarters:

- Eligibility criteria not met (eg, degree, years of experience).
- Application incomplete or illegible (eg, application not signed).
- Verification documents missing or incomplete.
- Correct fees not received.
- Documents show evidence of tampering.

Eligibility Appeals

Applicants may appeal a denial of eligibility to take the exam by emailing a written appeal and supporting documentation to certification@amwa.org within 10 business days from the date of the denial notification. If the 10-day mark falls after the registration deadline for the exam, applicants submitting an appeal will not be able to take the exam during the date

range originally requested.

The appeal-of-denial message must include the following:

- The basis for the appeal.
- Documentation supporting the appeal or showing that the matter identified in the denial message has been corrected.

An applicant's failure to follow the directions outlined in the *Applicant and Candidate Handbook* does not constitute a valid basis for appeal. Appeals based on failure of electronic or other delivery methods or of a university transcript office will be considered only in documented extraordinary circumstances.

Once the appeal materials have been reviewed, the applicant will receive an email notice of eligibility or continued ineligibility to sit for the exam.

- AMWA will maintain electronic files of all appeals and outcomes, including the complete documentation for each appeal, for 5 years.

The Exam

The exam is based on the results of a job analysis survey of medical writers and the definition of a medical communicator that was developed by an AMWA task force:

Medical communicators write, edit, or develop materials about medicine and health. They do this by gathering, evaluating, organizing, interpreting, and presenting information in a manner appropriate for the target audience. Professional medical writers also have communication expertise, awareness of ethical standards, and health care knowledge.

Materials prepared by medical communicators, collaborating with others or working independently, include the following:

- Patient education brochures, news articles,

web content, and books for the general public.

- *Journal articles and continuing education monographs for health care professionals.*
- *Regulatory documents for government agencies.*
- *Grant proposals for research scientists and institutions.*
- *Sales training and marketing materials for the pharmaceutical industry.*

From the job analysis, a content outline of the examination ([Appendix 2](#)) was developed that delineated the core competencies (ie, KSAs) of professional medical writers. The KSAs were classified according to the 5 domains of AMWA's definition of a medical writer: Gathering, Evaluating, Organizing, Interpreting, and Presenting. The Examination Content Outline is included in the MWC [Examination Candidate Study Guide](#), available on the AMWA website.

The exam questions address all 5 KSA domains according to rankings of importance indicated by survey data. The questions are presented in the context of different types of medical writing (eg, scientific manuscripts, patient-oriented content, regulatory writing).

The computer-based exam lasts 2.5 hours and comprises 125 multiple-choice questions presented in English. Example questions can be found in the MWC [Examination Candidate Study Guide](#), available on the AMWA website.

Schedule, Location, and Deadlines for The Exams

The exam is administered during 2 testing windows each year (December 1-21 and June 1-21) via computer-based testing (CBT) in a secure, proctored setting. The exam is offered at more than 300 testing centers throughout the world by the testing administration company, Iso-Quality Testing, Inc. (IQT). The exam can be taken at a

location of the approved candidate's choosing within date ranges set by the Commission. Exam appointments are subject to availability at the testing center. Payment of the registration fee entitles approved candidates to make an appointment to sit for the exam at an IQT proctored site. After paying the exam registration fee to AMWA, approved candidates will receive an authorization email from IQT with information about how to schedule an exam appointment at an IQT testing center.

For each exam period, the deadline for registering occurs about 3 weeks before the exam period begins. Registration deadlines for each exam period are listed at www.amwa.org/mwc. Registering for the exam and scheduling an appointment to sit for it need not be simultaneous; candidates can still schedule their exam appointment until 1 week before the exam period begins. However, testing locations, dates, and times may become limited, so it is strongly recommended to schedule the exam as soon as possible after registration. Unused registration fees do not carry over to the next exam period. Any candidate who decides not to sit for the exam after paying the registration fee may request a refund by emailing certification@amwa.org at least 1 week before the close of the exam period. A \$75 administrative fee will be deducted from the refund.

Candidates will be contacted to schedule an exam appointment during each registration period until their eligibility expires.

Except in extraordinary circumstances, candidates who need to reschedule or cancel an exam appointment must do so at least 5 business days before the scheduled exam and will be charged a \$25 administrative fee. Any rescheduled appointments must occur within the same testing period. Candidates will not be allowed to reschedule their exam appointment

within 5 business days before the exam date. No refund will be issued for cancellations less than 5 business days before the appointment or for no-shows. Exceptions may be made, with proper documentation, in extraordinary circumstances such as a documented sudden illness, medical or personal emergency, death of an immediate family member, jury duty, active-duty military assignment, severe weather, or a disaster precluding a candidate reaching the exam site. The nonrefundable \$75 administrative fee still applies in these extraordinary circumstances. Requests for cancellation due to extraordinary circumstances must be approved by IQT before requesting any exception from AMWA. No refunds will be given after a candidate sits for the exam.

See www.isoqualitytesting.com/locations.aspx for a current list of testing centers.

Please note this list is subject to change. A link to a complete list of testing center locations and availability will be provided during the exam appointment setting process.

For dates of upcoming exams, see the certification website (www.amwa.org/mwc).

Delay or Cancellation of the Exam

The exam will be delayed or cancelled only for emergencies (eg, if severe weather or a disaster makes the exam center inaccessible or unsafe). As emergency situations vary by region, please contact the testing center directly to receive up-to-date information regarding any delay or cancellation.

Security

Any candidate who gives or receives assistance with test questions or whose behavior is disruptive during the exam will be required to leave the exam room, and the situation will be reported to the Commission. The exam proctors

are authorized to make security decisions; there is no onsite appeal.

The entire question bank and all forms of the exam are the property of the Commission. Distribution of exam content through any form of reproduction, including oral and written communication, is strictly prohibited and punishable by law. Discussion of exam content with other candidates after the test is also considered a security breach and could result in certification being revoked.

Day of the Exam

Personal Identification

On the day of the exam, each candidate must present

- a government-issued ID with signature
- the candidate admission letter that was sent with the exam registration receipt from IQT.

Examples of valid government-issued ID documents are a driver's license with photograph, state ID card with photograph, passport, or military ID card with photograph. A temporary ID card is not acceptable. A digital ID is not acceptable.

If the name on the exam registration list differs from that on the candidate's primary form of identification, proof of name change (eg, marriage license, divorce decree, or court order) must be brought to the testing center.

Please arrive at the testing center to check in a minimum of 15 minutes before the scheduled appointment time.

Restrictions

- No personal items or valuables should be brought to the exam room. Only a small purse or wallet and keys are permitted.
- No cameras, notes, or tape recorders are allowed in the exam room. Use of a cell

phone/smartphone or other electronic device is strictly prohibited and will result in dismissal from the exam. Lockers are available onsite to secure personal belongings.

- No questions concerning the content of the exam may be asked during the exam.
- No food will be permitted in the exam room for any reason. Water policies vary by location. Please check with the testing facility regarding whether water is permitted and, if so, the type of container allowed.
- If a candidate taking the exam is dismissed for any reason, all exam fees will be forfeited.

Accommodation for Disabilities

The Commission is committed to the letter and spirit of the Americans with Disabilities Act of 1990 (ADA). Accordingly, special exam accommodation will be reviewed on an individual basis in compliance with ADA requirements.

- Special accommodation will be made only if requested and approved at least 4 weeks before the exam date.
- The [Special Accommodations Request Form](#) and a letter from a professional documenting the disability-related needs are required at the time of exam registration.
- Additional fees will not be charged to provide special accommodation, if approved.
- Information submitted to the Commission about candidate disabilities and testing will be kept confidential unless required to be disclosed to provide the accommodation.

Resources for Exam Preparation

The MWC Examination Content Outline appears in **Appendix 2** and is available in the [MWC Examination Candidate Study Guide](#) available on the AMWA website. The Study Guide also includes exam preparation recommendations, a definition of medical writing, examples of topic

categories, example questions that are representative of the types that may be included on the certification exam with an answer key and references, and selected exam preparation resources. The [Examination Content Outline](#) lists the KSAs considered necessary for competency in the field of medical writing and the approximate percentage of exam questions that will come from each area of the outline. Because the exam will include questions from all content area domains, the content outline can be used to guide candidate review in preparing for the exam. For example, if unfamiliar with a particular type of medical writing found in the content outline, such as regulatory writing or grant writing, MWC candidates can prepare themselves in those specific areas before taking the exam. Candidates can choose to review content from the references listed in the *Selected Resources* section of the [Examination Candidate Study Guide](#) or from other resources in the content areas. Other opportunities for learning new content or reviewing material for the exam could include attending a workshop at an AMWA annual or chapter conference and attending meetings of other organizations.

Notification of Exam Results

Candidates who complete the exam will receive notification of their results (passing/certified or not passing/not certified) from the Commission, typically within 15 business days after the close of the exam window. Those who achieve at least the minimum required score will receive an official email attesting to their certification. During this process, candidates should notify AMWA of any contact information changes.

Note: Exam results will not be provided over the telephone under any circumstances.

Appeals of Exam Results

Individuals may appeal the exam results, citing and providing evidence of extraordinary circumstances. Taking the exam with an unsuccessful result is not sufficient grounds for appeal. Appeals must include the reason for the appeal and supporting documentation. Appeals will be considered by the Ethics and Appeals Committee and must be submitted via email within 30 business days from the date of notification of the exam result.

Candidate Score Verification

After exam results are received, candidates may request a computer-based comparison of the candidate's responses and the exam answer key to ensure the accuracy of the reported score. The \$60 candidate score verification fee must be paid in advance and will be refunded if a scoring error is discovered. Contact certification@amwa.org regarding the score verification process.

Retaking the Exam

Once an applicant's eligibility to sit for the exam has been approved, the exam must be taken and passed within 2 years from the date of acceptance into candidacy. Two years of eligibility affords 4 exam windows. Eligible candidates will be contacted by AMWA at the beginning of the registration period for each exam window until either they pass the exam or their eligibility expires. Applicants must pay a registration fee for each exam attempted. If the exam is not taken and passed within 2 years from the application receipt date, the person must submit a new application and meet the eligibility requirements in effect for the new application date.

Use of the MWC Credential

Candidates who pass the exam will be considered certified as of the exam date and will be entitled

to use the credential Medical Writer Certified or MWC after their name. Before using the certification mark, candidates should review the *Terms and Conditions of Certification* agreed upon when the application form was signed. MWC is a registered certification mark. It is not to be punctuated with periods. Certification will expire at the end of the calendar year in which the 5-year certification anniversary falls. Certificants are encouraged to recertify every 5 years, (see page 5 of this Handbook).

By granting an MWC credential, the Commission and its affiliates assume no responsibility for the actions or activities of the certified individual and are released from all liability.

Misrepresentation of Certification

Inappropriate use of the credential will be referred to the Ethics and Appeals Committee. Individuals using the MWC credential without being duly certified by the Commission will be advised in writing by the Commission Chairperson of the seriousness of this offense and the legal ramifications of professional misrepresentation. Persons found to be using the credential after receiving such notification will not be permitted to take the exam. If the individual persists in using the credential, legal action may be taken.

Revocation of Certification

Certification may be revoked at the Commission's discretion after review by the Ethics and Appeals Committee. Grounds for revocation include the following situations:

- Falsifying an application for certification.
- Falsifying any information requested by the Commission.
- Cheating on the exam.
- Failing to maintain the confidentiality of the exam.

- Violating the *Terms and Conditions of Certification* or the *Adapted AMWA Code of Ethics*.
- Being convicted of a felony or of a crime relating to the provision of medical writing services.

Recertification

To maintain the MWC credential, certificants must recertify by the end of each 5-year certification period, before December 31 of the fifth year after certification was granted. (For example, persons certified in October 2020 must recertify by December 31, 2025.) Certificants may recertify by reexamination or by obtaining 50 continuing education credits related to the exam content outline. Those who choose to recertify by reexamination will be bound by the Commission's policies and procedures in place at that time. Those who choose to recertify by obtaining at least 50 points from qualifying recertification activities will need to reestablish eligibility under current requirements and submit a full application, with supporting documentation and appropriate fees.

Certificants who choose not to recertify, or who do not qualify for recertification either because they did not earn the requisite number of qualified recertification points within the 5-year time period or because they did not pass the exam for recertification, are no longer certified and may no longer use the MWC credential.

To locate the current version of this Handbook and the [Recertification Handbook](#), visit the certification webpages (www.amwa.org/mwc). The Recertification Handbook also delineates the procedures to follow and the qualifying activities and number of credits required for recertification. Certificants can begin accruing MWC recertification points immediately after they pass the exam.

Confidentiality and the Release of Testing and Certification Information

AMWA staff will verify certification status to members of the public on request, and an online directory of MWCs will be accessible on the AMWA website. To protect privacy, no individual test scores will be made available.

Fees and Refund Policy

All currency is expressed in US dollars.

- MWC application submission fee: \$175 (includes a nonrefundable \$75 administrative fee)
- Registration fee for exams within the US: \$550 (includes nonrefundable \$75 administrative fee)
- International registration fee for exams outside of the US: \$565 (includes nonrefundable \$75 administrative fee)
- IQT CBT exam appointment rescheduling/cancellation fee (with 5 or more business days' notice): \$25
- Exam score verification fee, upon candidate request: \$60
- MWC recertification fee (by reexamination): \$550 (includes nonrefundable \$75 administrative fee)
- MWC recertification fee (by points): \$400 (includes nonrefundable \$75 administrative fee)

Applicants who have been denied eligibility to take the MWC exam may request a refund of the MWC application submission fee, less the \$75 administrative fee. The process for requesting a refund is explained in the eligibility denial letter.

Candidates who are scheduled to sit for the exam who need to cancel their CBT exam appointment date may request a refund of the MWC exam registration fee, less the \$75

administrative fee. The process for requesting a refund is explained in the admission letter that candidates receive from IQT upon scheduling the appointment. The refund request must be received in writing more than 5 business days before the candidate's IQT CBT exam appointment date.

No refunds or credits will be given for failure to attend, late arrival, or early departure from the IQT CBT exam appointment, and no refunds will be given after a candidate sits for the exam. Exceptions may be made with proper documentation in extraordinary circumstances, such as a documented sudden illness, medical or personal emergency, death of an immediate family member, jury duty, active-duty military assignment, severe weather, or a disaster precluding a candidate's reaching the exam site. The nonrefundable \$75 fee still applies in these extraordinary circumstances. Requests for cancellation due to extraordinary circumstances must be approved by IQT before any exception is requested from AMWA.

The Commission reserves the right to verify any information submitted regarding an absence at the time of the exam.

Payments made with a credit card will be refunded only to the credit card used in the original transaction. Refunds for payments made by check will be issued to the payor identified on the check.

Appendix 1: Qualifying Work Experience

Activities That Constitute 2 Years of Paid Medical Writing Experience

To qualify for the MWC certification exam, an applicant must have at least 2 years of full-time, paid work experience in medical writing or the equivalent (eg, 4 years of documented part-time work at 20 hours/week) within the past 5 years. This eligibility criterion selects people whose core focus of their paid professional activity is medical writing, whether as an employee or as a freelancer.

This criterion excludes individuals from other professions who want to transition to medical writing. It also excludes physicians, clinical researchers, project managers, regulatory scientists, and other research and medical professionals for whom medical writing is not the core focus of their job. However, applicants may qualify even if their job title does not include “Medical Writer.” For example, someone at a small company who has mixed responsibilities but is performing medical writing tasks at least 20 hours per week may qualify.

An applicant’s CV or resume and letters of recommendation must show that the individual meets this professional paid medical writing requirement. The purpose of the letters of recommendation is to verify that the applicant is truly doing medical writing and that medical writing has been the applicant’s primary paid job responsibility full time for a minimum of 2 years or part time for a minimum of 4 years during the past 5 years. Therefore, if the applicant’s CV or resume does not clearly support that the applicant’s medical writing activities are performed full time and/or that medical writing is the core focus of the applicant’s paid work experience, the letters of recommendation should specifically describe how the applicant meets

these requirements.

The applicant’s professional medical writing experience must be in clearly conveying medical/scientific information (eg, data, knowledge, or scientific advancements) to patients, health care professionals, researchers, regulators, payors, or other relevant stakeholders. Activities must fall within the medical communication umbrella defined by AMWA as follows:

Medical communicators write, edit, or develop materials about medicine and health for target audiences. Professional medical writers also have communication expertise, awareness of ethical standards in the profession, and health care knowledge. Materials prepared by medical communicators, collaborating with others or working independently, include but are not limited to the following:

- *Patient education brochures, news articles, web content, and books for the general public.*
- *Journal articles for health care professionals and biomedical researchers.*
- *Continuing education materials for health care professionals.*
- *Regulatory documents for government agencies.*
- *Grant proposals for research scientists and institutions.*
- *Sales training and marketing materials for the pharmaceutical industry.*
- *Translations from one language to another of any of the above.*

One way to think about job role and certification qualification is by analogy to certification outside the medical writing field. Medical writers may extensively use project

management in their roles, may coauthor clinical trial protocols, and may communicate statistical concepts, but they would not thereby qualify by default for project management, clinical research, or statistics certification. Similarly, although writing in a health or medical field may be part of someone's job, that does not by default qualify the person to apply for medical writing certification.

In their application materials, applicants should make clear that they have met the requirements of working full time for at least 2 of the past 5 years as an employee or freelancer in a paid position where their core function is medical writing, or that they have worked part time (≥ 20 hours per week) for at least 4 of the past 5 years in a paid position where their core function is medical writing. The employment section of the CV or resume is an ideal place to substantiate that the applicant meets both the time and medical writing experience requirements, and these requirements should be further substantiated in the letters of recommendation.

Table 1 provides some examples of work activities that do—and do not—qualify as medical writing experience.

Table 1. Examples of Medical Writing Experience^a

Qualifies Towards Experience^b	Does Not Qualify Towards Experience
Pharmaceutical, biotechnology, clinical research organization, or freelance medical writer who writes drug development publications (eg, abstracts, posters, and manuscripts), regulatory documents (eg, clinical study reports, Common Technical Document clinical summaries and overviews), or continuing medical education materials (eg, medical education slide decks)	Health care professional who writes patient notes or insurance claim reports
Medical writer who writes clinical research manuscripts at a medical communication company	Physician, pharmacist, pharmaceutical clinical researcher, or university faculty member who writes research publications as only a part of their paid professional role
Medical education content developer who writes continuing medical education content for a medical communications company or agency	Physician or medical school professor who assembles lecture materials to teach a medical course
Medical writer who writes journal articles for a research institution	Physician, scientist, or statistician whose primary role is scientific or medical research and who write articles in support of that research
Medical editor who contributes substantive, macro-level reworking of journal articles, clinical research grant proposals, or protocol text to aid authors in document refinement	Researcher who helps colleagues or students refine manuscripts or other clinical research documents as part of their research role
Medical journalist, public health information writer, medical marketing content developer/writer, or freelance writer who prepares medical information documents to inform lay audiences about medical topics	Health professional whose clinical work includes preparing materials to educate patients and caregivers about medical topics
Medical writer of online content for a medical information company providing comprehensive clinical information to physicians and other health professionals	Educator who, as part of their teaching role, prepares materials for students about medical topics
Health outcomes writer who prepares clinical content for health economic/outcomes journal articles or health technology assessments	Physician, medical consultant, or claims processor who works for a payer organization (eg, insurance or government) and as part of their role writes claimant medical record case reports

^a These examples are not all-inclusive.

^b Qualified experience as a paid medical writer must be core to the individual's job description and daily tasks, whether as an employee or freelancer.

Appendix 2: Content Outline for the Exam

The Examination Content Outline is used to develop the Medical Writing Certification Examination and thus can be used to guide preparation and to ensure the appropriate knowledge and critical thinking skills necessary to earn the MWC credential. All areas of the content outline will be represented on the exam. Thus, the outline will allow individuals to

- become familiar with the emphasis (approximate percentage of content) for each content area
- know the topics and the appropriate medical writing tasks associated with each content area
- inventory their current knowledge related to each content area
- build a study plan based on their knowledge inventory (for example, those not familiar with regulatory writing will probably need to study materials in this area).

Medical Writing Certification Examination Content Outline

1. Gathering (16% of content)

- A. Determine purpose of document
- B. Identify context for document
- C. Identify target audience
 - 1) Assess needs
 - 2) Identify knowledge gaps
- D. Select appropriate output type (eg, publications, regulatory documents, continuing medical education materials, patient education)
- E. Identify appropriate outlet (eg, target journal, other print media, web)
- F. Apply effective processes to gather information
 - 1) Conduct a literature search (eg, PubMed/MEDLINE)
 - 2) Elicit information from collaborators and stakeholders (eg, interview researchers, statisticians, clinicians, patients, regulators, thought leaders)
 - 3) Identify other relevant sources (eg, websites, databases, data outputs, clinical guidelines)
 - 4) Identify relevant writing guidelines, instructions, and ethical standards (eg, journal instructions for authors, grant application instructions, regulatory requirements)
 - 5) Identify relevant document models and templates
 - 6) Identify necessary forms and supporting materials (eg, permission to reprint, disclosures, copyright)

2. Evaluating (19% of content)

- A. Evaluate collected information with regard to
 - 1) content (ie, quality and relevance, level of evidence)
 - 2) audience (ie, appropriate and relevant to needs)
 - 3) context (ie, credibility of sources and suitability for purpose)
- B. Perform fact or data check
- C. Identify inconsistencies in data or other content presented
- D. Conduct critical review of a draft
 - 1) Assess quality of writing (eg, clarity, readability, usability, logic, organization, consistency)
 - 2) Provide constructive criticism
 - a) Provide options for solutions
 - b) Craft appropriate queries
 - 3) Evaluate representation and description of data
 - 4) Recognize ethical considerations with respect to self and others (eg, conflict of interest, disclosure, authorship, plagiarism, duplicate publications)
- E. Evaluate for completeness, fair balance, and absence of bias
- F. Determine appropriate levels of editing (eg, proofreading, microediting, macroediting)
- G. Implement best approach to resolve issues (eg, author disagreements, scope change, unexpected delays)

3. Organizing (19% of content)

- A. Determine correct organization of a document (eg, IMRAD)
- B. Identify and prioritize key elements of content
- C. Structure content to communicate the message
- D. Develop an outline
- E. Apply templates and guidelines to documents (eg, CONSORT, ICMJE, FDA, ICH, PRISMA, ACCME, HIPAA, health literacy)
- F. Determine structure of tables and figures to best communicate data
- G. Determine which references to cite in a document
- H. Comprehend processes of developing and disseminating documents (eg, news releases, publications, grant and regulatory submissions)
- I. Design project work plan
 - 1) Determine deliverables
 - 2) Develop timeline
 - 3) Recognize roles, responsibilities, and processes
- J. Track progress and status of a project
- K. Determine process for tracking changes and version control
- L. Recognize and apply appropriate software and technology to use in developing a document

4. Interpreting (19% of content)

- A. Comprehend relevant medical and scientific content
 - 1) Understand terminology
 - 2) Understand concepts (eg, cellular and molecular level, organism level, and population level)
 - 3) Understand study design (eg, clinical trial, case control, longitudinal study)
 - 4) Understand statistical concepts (eg, *P* value, CI, power)
- B. Interpret clinical and numerical data
- C. Derive key messages
- D. Determine inferences, implications, or clinical relevance

- E. Synthesize and integrate information
- F. Revise or repurpose existing content
- G. Comprehend review processes (eg, peer review, grant review, regulatory review)
- H. Respond to reviewers' comments
 - 1) Interpret feedback from reviewers
 - 2) Determine appropriate responses

5. Presenting (27% of content)

- A. Present the message logically and coherently (ie, tell the story)
- B. Retain the intended meaning of source materials or original document
- C. Communicate scientific content appropriately
- D. Communicate statistical content appropriately
- E. Develop clear, concise prose
- F. Write an abstract (eg, for presentation or publication) or executive summary
- G. Tailor prose to the audience
- H. Build logical and science-based arguments
- I. Apply proper mechanics
 - 1) Apply rules of grammar, spelling, and punctuation
 - 2) Apply proper word usage (general and medical), correct nomenclature, and nondiscriminatory language
 - 3) Construct effective sentences
 - 4) Construct effective paragraphs (eg, topic sentences, transitions, repetition of key terms)
 - 5) Apply techniques for cohesion between paragraphs and sections
- J. Apply principles of proofreading
- K. Apply basic principles of design and layout (eg, document, slide, poster, web)
- L. Apply principles of visual presentation of data (eg, tables, figures)
- M. Write document to adhere to standardized formats, guidelines, instructions, and ethical standards