SPECIAL ARTICLE

Medical Writing for Non-Native English Speakers: Help for Usage of Articles

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ABSTRACT

Many non-native English speakers, especially those whose mother language has no articles (like Slavic languages) make mistakes when they speak or write English. This may sound rather rough to English-speaking listeners or readers. To improve their command of the language and the usage of articles, individuals for whom English is a second language should review the usage of articles from time to time. We prepared a short text on this subject and also included exercises from the medical publications.
Key words: articles, definite article, indefinite articles, zero article, omitted article, non-native English speakers, exercises.

INTRODUCTION

Many non-native speakers, especially those whose mother languages have no articles, sometimes have difficulty speaking standard English. This is particularly true of Slavic languages that lack articles as a part of speech. As a result, this may sound rough to native English speakers. More importantly, writing that contains frequently misued or lack of articles is harder to understand and less appreciated. Medical articles and reports that suffer from this condition are troublesome to medical journal editors, reviewers and readers alike. For that reason, individuals who speak English as a second language should review the use of articles from time to time. While doing such a review, we prepared a short text to help our colleagues appraise their facility with this subject in both speaking and writing. We also included exercises from the medical publications.

ARTICLES, GENERAL

Three short words in the English language, *a, an,* and *the,* are used as articles. Indefinite articles (a/an) are used when the speaker or writer is talking about a non-specific member of a group, while a definite article (the) is used for a specific member(s) of a group. Articles are basically adjectives, meaning they can be used as limiting adjectives1 that preceed a noun or nounphrase and determine the noun or phrase's use to indicate something definite (the) or indefinite (a, an). An article might stand alone or be used with other adjectives. For example, one would say a road, or a brick road, but to make it specific, one would say *the* yellow brick road.

Proper nouns (name of person, place, or thing) usually require no article, but some, like the *Danube river or the United Kingdom*, should have a definite article. Common nouns are words used to name general items rather than specific ones, eg. Common noun: I really want to live in a <u>big city</u>. Proper noun: Of all places I have lived, <u>Banja Luka</u> was the best. Common nouns can be divided into two categories, count-

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able and uncountable. Countable nouns are those that refer to something that can be counted. They have both singular and plural forms, eg. cat/cats, man/men. Most nouns come in this category. A smaller number of nouns do not refer to things that can be counted, and they do not regularly have a plural form; these are uncountable nouns. Examples include rain, wine, milk, wood. Uncountable nouns can't be preceded by "a" or "an". Many abstract nouns are typically uncountable, eg. truth, humour, love.

Choosing article is one of the most confusing parts of English grammar. Many languages have no articles and other use articles very differently than English language. To master the use of articles one should listen native speakers, as much as he/she can, and practice. The process of choosing article starts with identifying noun. The articles "a" and "an" are indefinite articles. They are used with a singular countable noun when the noun referred to is nonspecific or generic. The article "the" is a definite article. It is used to show specific reference and can be used with both singular and plural nouns and with both countable and uncountable nouns. In order to help non-native speakers in the use of articles, Table 1 shows the basic rules for their use.

Table 1: Basic rules of choosing article

Type of noun	Singular/ Plural	Use of the articles for definite or indefinite nouns*
Proper (specific) nouns**		None
Common nouns***		For definite noun use "the"
Countable	Singular	For indefinite noun use "a" or "an"
	Plural	For definite noun use "the" For indefinite noun None
Uncountable		For definite noun use "the" For indefinite noun None

*Definite nouns are specific nouns. In the sentence "The dog bit me" we are referring to a specific dog. "The dog" is an example of a definite noun with the proper article. However, when we are referring to unknown or unidentified dog, we shall use an indefinite "A dog bit me." "A dog" is an example of an indefinite noun with a proper article.

**Proper nouns include names of persons, places, or things. They usually require no article; there are exceptions to this rule including the names of countries that contain words like Republic, Kingdom, Union, Empire, or names of some geographical regions, oceans, or rivers.

***Common nouns are words used to name general items rather than specific ones, eg. Common noun: To live in a big city. Proper noun: I have lived in Banja Luka. Countable nouns are those that refer to something that can be counted. They have both singular and plural forms, eg. cat/cats, man/men. A smaller number of nouns do not refer to things that can be counted, and they do not regularly have a plural form; these are uncountable nouns.

Examples include rain, wine, milk, wood. Uncountable nouns can't be preceded by "a" or "an".

DEFINITE ARTICLE

The word the is a definite article that is used when a speaker is talking about a specific member of a group. The noun being modified can be either singular (*the house*) or plural (*the houses*) as well as reference to count—the number of things. For example, ***the bicycle*** was stolen today, or ***the fog*** *that appeared last evening caused many accidents*. A definite article is used only when its noun is obvious to both speaker and listener. It points to a definite object that is so well understood that it does not need description (e.g., *the letter is here* is shortened from *the letter that you expected is here*); the same is true for something that is about to be described (*the sights of Sombor*) or something that is important (*the medal of Karađorđe*).

A noun or noun phrase is specific when both speaker and listener know which specific place, person, or thing is being talked about. In such a case, the definite article is used with singular and plural countable and uncountable nouns. Example: *The milk* you spilled is all over *the floor* in *the room*. A noun is also specific when

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it represents something unique, where there is only one such thing or person: *The president* was right. A noun or noun phrase can be made specific by context.[2] Example: Who are you? I'm *the nurse.* (A patient in a hospital asked this question when he first awakened after anesthesia.)

Certain adjectives can make a noun represent something unique. Examples of such adjectives are *right, wrong, first, only*, and the superlative forms of adjectives. Examples: *The best solution* is to stop talking. Sometimes it's the o*nly solution.*

The definite article (*the*) is used with the names of some countries, such as those that are plural or include a "political" word for instance *Republic, Kingdom, Union*, or *Empire*. Example: *The United Kingdom* is a big naval power. T*he Federative Socialist Yugoslavia* disappeared from the map. *The United States of America* is very interesting country. Nonetheless, with an abbreviated form, such as *Made in USA*, this country's name is used without the definite article.

The names of some geographical features and regions are preceded by the definite article. Example: *The Adriatic Sea, The Atlantic (Ocean), The Black Sea, The Mediterranean (Sea), The Suez Canal, The Danube River, The Mississippi River, The Rio Grande River, The Volga River, The Balkans, The Middle East (The Near East), The North Pole, The Orient, The Sahara, The Alps, The Andes, The Caucasus Mountains, The Pyrenees, The Urals*. Also, the names of specific airplanes, ships, and hotels often use the definite article. Example: *The Concorde, The Titanic, The Grand Hotel.*

A noun is often indefinite the first time a speaker mentions it. However, it is usually definite after the first mention. Example: Should they be allowed to camp close to *an unspoiled Danube beach*? *The beach* will be spoiled. I bought *a bicycle* last month. *The bicycle* was stolen yesterday.

For successful communication in writing, short titles tend to be more attractive. Therefore Hall[3] suggests that definite articles can usually be dispensed with. [He also recommends discarding excessive adjectives, and 'noun salads' (a string of nouns masquerading as adjectives to form clumsy phrases like "community hospital liaison nurse activity analysis") in order to achieve a more accurate and interesting title.]

Indefinite articles are *a* and *an*. They are used only with singular countable nouns (a cat but not "a rice"). Remember, a countable noun is anything that can be counted. The indefinite articles point to nonspecific objects, things, or persons that are not distinguished from other members of a class. They may be singular (*a doctor*), or uncountable (*a multitude*), or generalized (*A dog is a common household pet* is a general statement about any and all dogs.)[3]

The choice of "a" or "an" word depends on the sound of the word it precedes. "A" comes before any word beginning with a **consonant sound** regardless how word is spelled. So, in addition to words that begin with consonants, this includes the words that begin by the following sounds: (ju), as in the words "user" or "European", and (wa) as in the word "one". Example: *a man, a dog, a United Nation, a one-pound weight, a historic occasion, a user.* "An" should be used before words beginning with a **vowel sound** to modify a nonspecific, singular countable noun. This includes vowels and, as well, the words that begin with a silent "h" as in "herb" or "honor." Thus, we use *an honor, an herb, an elephant.* This kind of indefinite article (*an*) makes pronunciation easier and clearer.

In early English "an" meant one and was the only form used. The "n" slowly disappeared before words with consonant sounds, and indefinite article "a" was formed. Because it is difficult to say *a idea* or *a episode*, the indefinite article "an" remained. Thus, it is much easier to pronounce an idea, an episode, and all other words that need the indefinite article. It is important that before words that begin with vowels that have a consonant sound an indefinite article "a" must be used (e.g., a United Nation, a one-pound weight, a user).

For the abbreviate form of the title a medical doctor (MD), the indefinite article "an" is used. Example: When an MD came in, all students became silent. MD is pronounced /em di/.

The indefinite article (a/an) should be used with indefinite singular countable nouns. Example: It is brutal to harm or displace **a** species.

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ZERO ARTICLES

Certain nouns require neither an indefinite nor definite article before them. Some usages call for no article at all or an article implicitly present, such as one before a plural countable nouns or uncountable nouns.[1] Example: Although both new and washed bottles are stacked nearby, the extract is poured into new bottles only (*the* is implicit before *new bottles*); Environmentalists are against developments (plural countable noun); Environmentalists are against *development* (uncountable noun).

Zero, or no article usually occurs in idiomatic references to time, illness, transportation, personal routines, and meals. Example: *by sunset, has cancer, travel by train, go to bed, make breakfast.*

OMITTED ARTICLE

The absence of an article may alter a sentence's meaning. Example: The meaning of the news brought us little comfort (we weren't comforted) changes if an article (**a**) is inserted before *little: ...the news brought us a little comfort (...we felt somewhat comforted).*

ARTICLES AND GENERIC NOUNS

A noun is used generically when it represents all members of a class of persons, places, or things. One may use *the, a/an* or no article with generic nouns in order to generalize, classify, or define. Example: Teachers are devoted to their profession (generalization); *A monkey* is a primate (classification); *A car* is a four-wheeled vehicle (definition).

For some singular generic countable nouns, the definite article is used. They fall into three main categories: inventions, musical instruments and animal species. Example: The wheel is one of most important inventions. Ana plays the violin. The Siberian tiger is endangered.

There are four ways of classifying or defining with generic countable nouns.[2]

PRACTICE

Part One

Fill in the blanks with the correct form of the articles **a**, **an**, and ***the***. Use ***o*** if no article is needed. The following text presents several segments from the paper entitled *Conflicting interests involved in the process of publishing in biomedical journals*.[4]

Authors submit manuscripts according to acceptance criteria for __1_____specific journals. Editors, with help of reviewers, assess __2_____ manuscripts and make final decisions on publication. __3_____ main goal of the editor is to fulfill the needs of his readers, providing __4_____ most current and relevant information by proper presentation and interpre¬tation of research data. It is well known that par¬ticipants in __5_____ publication process, authors, peer reviewers, and editors, sometimes have potential financial interests or __6_____other concerns related to __7_____ articles under consideration. This brief discussion on __8_____conflicting interests of all participants in the publishing process may help readers to understand what can be done to provide better evaluation of manuscripts and in¬crease __9_____ credibility of published articles.

Journal editors play __10_____major role in the pub¬lishing process, including notation of __11_____ potential conflicts of interests of __12_____authors, peer reviewers, journal's editorial board members, and publishers. Any editor, or any member of __13_____ executive board, who has conflicts of interests relating to articles under consideration should absent himself from __14_____ editorial decisions.

Peer-review is a process of critiquing __15_____ manu¬script before publication. The word "peer" means "__16_____ person of the same rank, or __17_____ person who is __18_____ member of __19_____ same group as another". __20_____ role of __21_____ manuscript assessor (reviewer or referee) is that he/she advises __22_____ editor on __23_____ originality, quality and suitability of __24_____manuscript for publication and provides written feedback that will be transmitted to __25_____ authors. __26_____ ideal reviewer is as knowledgeable as __27_____ author(s) on the subject, and he should also be familiar with __28_____ goals and rules of the manuscript review.

When __29_____ first periodical journals, Le Iovrnal des Sçavans (January 5, 1665) and Philosophical Transactions of the Royal Society (March 6, 1665) were introduced in Paris and London, respectively, __30_____ peer review process did not exist, but 66 years later __31_____ Royal Society of Edinburgh published __32_____ first peer reviewed collection of medical ar¬ticles. Development of __33_____ peer-reviewed process over __34_____ next two centuries and beyond followed various paths to ensure __35_____ quality of scientific information. It has not been always accepted that peer reviewing is necessary, but over time most researchers agree that __36_____peer review system is a necessary tool for publishing.

__37_____ objective critique of a scientific manu¬script is __38_____ essential element of __39_____ peer review assessment. Current scientific peer-review sys¬tem is not perfect, but it is __40_____ required step in __41_____ editing process of __42_____ majority of biomedical journals. Peer review system has gradually devel¬oped to __43_____ present day, where experts in __44_____field examine __45_____scientific quality and determine __46_____novelty of __47_____study, clarity of presentation, ethi¬cal validity, and technical quality of __48_____manuscript. By __49_____end of __50_____20th century, __51_____majority of __52_____medical journals used __53_____ peer-re¬viewed system. __54_____reviewers recommend acceptance, rejection, or revision. __55_____editor then communicates with both reviewers and authors in order to improve __56_____ manuscript before he makes __57_____ final decision on publication.

From __58_____ beginning of __59_____ peer-reviewed sys¬tem, there have been pros and cons, and many dis¬cussions propose improvements, such as blinded reviewers or authors, unmasking __60_____identity of __61_____reviewer to co-reviewer, open review process or even elimination of __62_____ review process. __63_____recommendations of __64_____ reviewers, in __65_____any journal published in __66_____ so called "small scientific com¬munity" especially if it is published in __67_____ local language, sometimes may be either uncritically positive or negative, but that is no reason to avoid this step in __68_____publishing.

Part Two

Fill in the blanks with the correct form of the articles a, an, and the. Use 0 if no article is needed. The following text presents a segment from the paper entitled *Severe non-opioid induced pruritus following spinal block*.[5]

Case Presentation: __69____ 57-year-old, 122 kg, 6'1" male, had __70____ past medical history of hypertension, glucose intolerance, benign prostatic hypertrophy, and right-sided Bell's palsy. This patient was admitted for cystolithotripsy under spinal anesthesia. Subarachnoid block produced __71____ prompt onset of anesthesia with satisfactory sensory blockade to __72____ level of __73____ tenth thoracic dermatome. Propofol infusion was maintained for sedation, and __74____ Ramsay scale of 5 was obtained. The patient tolerated __75____ procedure with no untoward events and was transferred to __76____ Post Anesthesia Care unit. Approximately 60 minutes after arrival in __77____ recovery room, __78____ patient complained of intense itching confined to soles of both feet. He reported __79____ onset of this discomfort soon after he awoke in __80____ OR. Upon evaluation, __81____ patient had no motor block and sensory recovery to __82____ level of __83____ L3 dermatome. Treatment of __84____ present severe pruritus was initiated with __85____ intravenous lidocaine. Ten minutes later __86____ patient reported no relief (verbal analog scales 10/10). His discomfort was so great that physical restraint was required to keep him from getting of __87____ bed and excoriating his feet. Subsequently, IV diphenhydramine controlled his agitation but had no effect on __88____ severe itching. Subhypnotic propofol infusion was started with __89____ total infusion time of thirty minutes. __90____ itching subsided dramatically after five minutes and after 20 min was no longer present. At that time, there were __91____ complete resolution of sensory and motor block and __92____ patient was discharged from __93____ recovery room and advised to pursue __94____ work up for diabetic neuropathy and to seek follow up in __95____ pain clinic if symptoms recurred. In __96____ mean time patient had another cystoscopy procedure under spinal anesthesia and had __97____ exactly __98____ same course in __99____ Post Anesthesia Care unit. __100____ only difference was that prior to __101____ placement of subarachnoid block he received __102____ IV fentanyl as __103____ premedication.

Part Three

Fill in the blanks with the correct form of the articles *a*, *an*, and *the*. Use *0* if no article is needed. The following text presents several segments from the book entitled "How to write a paper"[3] and "Statistical methods for anesthesia and intensive care."[6]

Abstracts. After __104____ title, __105____ abstract is __106____ second most read part (frequently __107____ only other red part) of paper, and so is likely to __108____ basis on which __109____ work is judged by uncritical readers. It is also __110____ first part of __111____ paper that an editor reads carefully, and it may provoke __112____ choice of references. Like __113____ title, __114____ abstract will reward time spent on it and should be short, intelligible, informative, and interesting. It should be __115____ digest of __116____ whole paper and contain its essence. It should consist of four basic parts, which can vary individually in length. These should describe succinctly (a) why what was done was done; (b) what was done; (c) what was found; and (d) what was concluded. __117____ permissible length may be defined by the journal in question, but 200 words is a good average target that should be exceeded only in exceptional circumstances. __118____ Vancouver Group suggests a maximum of 150 words for __119____ unstructured abstracts and 250 for fully structured formats. The process takes time. Remember, __120____ text that is easy to read is usually hard to write.

Statistical methods. 'Statistics' is __121____ science of collecting, describing and analyzing data that are subject to random variation. It consists of two main areas: (i) descriptive statistics, whereby __122____ collection of data is summarized in order to characterize features of its distribution, and (ii) inferential statistics, whereby these summary data are processed in order to estimate, or predict, characteristics of another (usually larger) group.

Before __123____ research study is undertaken it is important to consider the nature of __124____

observations to be recorded. This is an essential step during ___125_____ planning phase, as ___126_____ type of data collected ultimately determines ___127_____ way in which ___128_____ study observations are described and which statistical tests will eventually be used.

At ___129_____ most basic level, it is useful to distinguish between two types of data. ___130_____ first type of data includes those that are defined by some characteristic, or quality, and are referred to as ___131_____quailtative data. ___132_____ second type of data includes those that are measured on numerical scale and are referred to as quantitative data.

Because qualitative data are best summarized by grouping the observations into categories and counting ___133_____ number in each, they are most often referred to as categorical (or nominal) data. Examples of categorical data: 1. Gender (male, female), 2. Type of operation (valvular, coronary artery, myocardial, pericardial, other), 3. Type of ___134_____ICU admission (medical, surgical, physical injury, poisoning, other), 4. Cardiovascular adverse events (acute myocardial infarction, congestive cardiac failure, arrhythmia, sudden death, other). ___135_____ simplest way to describe categorical data is to count the number of observations in each group. These observations can then be reported using absolute count, percentages, rates or proportions.

If there is___136_____ natural order among categories, so that there is ___137_____ relative value among them, then ___138_____ data can be considered as ordinal data. Although there is ___139_____ semi-quantitative relationship between each of ___140_____ categories on an ordinal scale, there is not ___141_____ direct mathematical relationship. For example, ___142_____ pain score of 2 indicates more pain than a score 1, but it does not mean twice as much pain, nor is ___143_____ difference between ___144_____score of 1 and 0 equal to ___145_____ difference between ___146_____ score of 3 and 2.

For ordinal data, ___147_____ numerical scoring system is often used to rank ___148_____ categories by ___149_____ non-numerical record (A, B, C, D; or +, ++, +++, ++++). ___150_____numerical scoring system does, however, have practical usage, particularly for ___151_____ convenience of data recording and eventual statistical analysis. These observations can be described by ___152_____ absolute count, percentages, rates or proportions. Ordinal data can also be summarized by ___153_____ median value and range.

Examples of ordinal data: 1. Pain score (0=no pin; 1=mild pin; 2= moderate pain; 3. severe pain; 4. unbearable pain); 2. Preoperative risk (ASA* I/II= low risk; ASA III= mild risk; ASA IV= moderate risk; ASA V= high risk).

Quantitative data are more commonly referred to as numerical data; these observations can be subdivided into discrete and continuous measurements. ___154_____observations that are counted are discrete numerical data and observations that are measured are usually continuous data. Examples of numerical data: episodes of myocardial ischemia (discrete), body weight (continuous), creatinine clearance (continuous), cardiac index (continuous), respiratory rate (discrete/continuous), post-tetanic (discrete).

Part Four

Fill in the blanks with the correct form of the articles **a**, **an**, and **the**. Use 0 if no article is needed. The following text presents the abstract from the paper entitled *"Seven decades of angiotensin (1939-2009).*[7]

Two research groups in both North and South America independently discovered that renin released a novel vasopressor agent. The Argentine group named it hypertensin, and called its plasma protein substrate hypertensinogen. The group from the United States named it angiotonin. In 1958, Braun Menendez and Irvine Page suggested that ___155_____ peptide should be named angiotensin. The combined name eventually became commonly used to avoid linguistic confusion. Research scientists and physicians today acknowledge that studies of ___156_____ renin–angiotensin system (RAS) have greatly improved our understanding of several diseases. Certainly, medical practice profited significantly from___157_____ synthesis and application of numerous pharmaco-

logical agents that antagonize either___158_____ the biosynthesis or pharmacological responses of endogenously generated angiotensin II. Ultimately, discovery of ___159_____ renin−angiotensin system led to many studies that resulted in therapies for vascular disease. This article briefly reviews research related to___160_____ discovery of angiotensin and indicates___161_____importance of additional studies related to___162_____ RAS.

CONFLICT OF INTERESTS

The authors declare no conflict of interest.

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ANSWER KEY

Part One
1.0, 2.the, 3.The, 4.the, 5.the, 6.0, 7.the, 8.0, 9.the, 10.a, 11.the, 12.0, 13.the, 14.0, 15.a, 16.a, 17.a, 18.a, 19.the, 20.The, 21.the, 22.the, 23.the, 24.a, 25.the, 26.An, 27.the, 28.the, 29.the, 30.the, 31.The, 32.the, 33.the, 34.the, 35.the, 36.a, 37.An, 38.an, 39.the, 40.a, 41.the, 42the, 43.the, 44.the, 45.the, 46.the, 47.the, 48.a, 49.the, 50.the, 51.the, 52.0, 53.the, 54.The, 55.The, 56.the, 57.A, 58.the, 59.the, 60.the, 61.a 62.the, 63.The, 64.the, 65.0, 66.the, 67.a, 68.0.

Part Two
69.A, 70.a, 71.a, 72.the, 73.the, 74.a, 75.the, 76.the, 77.the, 78.the, 79.the, 80.the, 81.the, 82.the, 83.0, 84.the, 85.0, 86.the, 87.the, 88.the, 89.a, 90.The, 91.the, 92.the, 93.the, 94.a, 95.the, 96.the, 97.the, 98.the, 99.the, 100.The, 101.the, 102.0, 103.a.

Part Three
104.the, 105.the, 106.the, 107.the, 108.the, 109.the, 110.the, 111.a, 112.the, 113.the, 114.the, 115.a, 116.the, 117.the, 118.the, 119.0, 120.0, 121.the, 122.a, 123.a, 124.the, 125.the, 126.the, 127.the, 128.the, 129.the, 130.The, 131.0, 132.The, 133.the, 133.the, 134.0, 135.The, 136, 137a, 138.the, 139.a, 140.the, 141.a, 142.a, 143.the, 144.a, 145.the, 146.a, 147.a, 148.the, 149.a, 150.A, 151.the, 152.an, 153.the, 154.0.

Part Four
From 155. to 162.the.