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 misused 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 adjectives that precede a noun or nonnoun phrase 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 big city. Proper noun: Of all places I have lived, Banja Luka was the best. Common nouns can be divided into two categories, count-
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

<table>
<thead>
<tr>
<th>Type of noun</th>
<th>Singular/ Plural</th>
<th>Use of the articles for definite or indefinite nouns*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Proper (specific) nouns**</td>
<td>None</td>
<td></td>
</tr>
<tr>
<td>Common nouns***</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Countable</td>
<td></td>
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</tr>
<tr>
<td></td>
<td></td>
<td>For definite noun use “the”</td>
</tr>
<tr>
<td></td>
<td></td>
<td>For indefinite noun use “a” or “an”</td>
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<tr>
<td></td>
<td>Plural</td>
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<td>For definite noun use “the”</td>
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<td></td>
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<td>For indefinite noun None</td>
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<td>Uncountable</td>
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</tr>
<tr>
<td></td>
<td></td>
<td>For indefinite noun None</td>
</tr>
</tbody>
</table>

*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 Karadorde).

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
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. 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 *only* 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. *The Federal 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.


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 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.)*

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.
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.*

Authors submit manuscripts according to acceptance criteria for specific journals. Editors, with help of reviewers, assess manuscripts and make final decisions on publication. The main goal of the editor is to fulfill the needs of his readers, providing most current and relevant information by proper presentation and interpretation of research data. It is well known that participants in publication process, authors, peer reviewers, and editors, sometimes have potential financial interests or other concerns related to articles under consideration. This brief discussion on 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 increase credibility of published articles.

Journal editors play major role in the publishing process, including notation of potential conflicts of interests of authors, peer reviewers, journal’s editorial board members, and publishers. Any editor, or any member of executive board, who has conflicts of interests relating to articles under consideration should absent himself from editorial decisions.

Peer-review is a process of critiquing manuscript before publication. The word “peer” means person of the same rank, or person who is member of same group as another. The role of manuscript assessor (reviewer or referee) is that he/she advises editor on originality, quality and suitability of manuscript for publication and provides written feedback that will be transmitted to authors. Ideal reviewer is as knowledgeable as author(s) on the subject, and he should also be familiar with goals and rules of the manuscript review.

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

Objective critique of a scientific manuscript is essential element of peer review assessment. Current scientific peer-review system is not perfect, but it is required step in editing process of majority of biomedical journals. Peer review system has gradually developed to present day, where experts in field examine scientific quality and determine novelty of study, clarity of presentation, ethical validity, and technical quality of manuscript. By end of 20th century, majority of medical journals used peer-reviewed system. Reviewers recommend acceptance, rejection, or revision. Editor then communicates with both reviewers and authors in order to improve manuscript before he makes final decision on publication.

From beginning of peer-reviewed system, there have been pros and cons, and many discussions propose improvements, such as blinded reviewers or authors, unmasking identity of reviewer to co-reviewer, open review process or even elimination of recommendations of reviewers, in any journal published in local language, sometimes may be either uncritically positive or negative, but that is no reason to avoid this step in publishing.
Part Two

The following text presents a segment from the paper entitled "Severe non-opioid induced pruritus following spinal block."^\text{5}\]

Case Presentation: A 57-year-old, 122 kg, 6'1" male, had a 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 a prompt onset of anesthesia with satisfactory sensory blockade to T10 dermatome. Propofol infusion was maintained for sedation, and a Ramsay scale of 5 was obtained. The patient tolerated the procedure with no untoward events and was transferred to a Post Anesthesia Care unit. Approximately 60 minutes after arrival in the recovery room, the patient complained of intense itching confined to soles of both feet. He reported an onset of this discomfort soon after he awoke in the OR. Upon evaluation, the patient had no motor block and sensory recovery to T2 level of L3 dermatome. Treatment of the present severe pruritus was initiated with intravenous lidocaine. Ten minutes later, the patient reported no relief (verbal analog scales 10/10). His discomfort was so great that physical restraint was required to keep him from getting out of bed and excoriating his feet. Subsequently, IV diphenhydramine controlled his agitation but had no effect on the severe itching. Subhypnotic propofol infusion was started with a total infusion time of thirty minutes. The itching subsided dramatically after five minutes and after 20 min was no longer present. At that time, there was complete resolution of sensory and motor block and the patient was discharged from recovery room and advised to pursue work up for diabetic neuropathy and to seek follow up in a pain clinic if symptoms recurred. In the mean time, the patient had another cystoscopy procedure under spinal anesthesia and had exactly the same course in a Post Anesthesia Care unit. The only difference was that prior to the placement of subarachnoid block he received IV fentanyl as premedication.

Part Three

The following text presents several segments from the book entitled "How to write a paper" and "Statistical methods for anesthesia and intensive care."^\text{6}\]

Abstracts. After the title, the abstract is the second most read part (frequently the only other red part) of paper, and so is likely to be the basis on which work is judged by uncritical readers. It is also the first part of a paper that an editor reads carefully, and it may provoke choice of references. Like the title, the abstract will reward time spent on it and should be short, intelligible, informative, and interesting. It should be a digest of the 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. 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. The Vancouver Group suggests a maximum of 150 words for unstructured abstracts and 250 for fully structured formats. The process takes time. Remember, text that is easy to read is usually hard to write.

Statistical methods. "Statistics" is the science of collecting, describing and analyzing data that are subject to random variation. It consists of two main areas: (i) descriptive statistics, whereby 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 research study is undertaken it is important to consider the nature of...
observations to be recorded. This is an essential step during planning phase, as type of data collected ultimately determines way in which study observations are described and which statistical tests will eventually be used.

At most basic level, it is useful to distinguish between two types of data. First type of data includes those that are defined by some characteristic, or quality, and are referred to as qualitative data. 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 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 ICU admission (medical, surgical, physical injury, poisoning, other), 4. Cardiovascular adverse events (acute myocardial infarction, congestive cardiac failure, arrhythmia, sudden death, other). 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 natural order among categories, so that there is relative value among them, then data can be considered as ordinal data. Although there is semi-quantitative relationship between each of categories on an ordinal scale, there is not direct mathematical relationship. For example, pain score of 2 indicates more pain than a score 1, but it does not mean twice as much pain, nor is difference between score of 1 and 0 equal to difference between score of 3 and 2.

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

Examples of ordinal data: 1. Pain score (0=no pain; 1=mild pain; 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. 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)."

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 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 renin–angiotensin system (RAS) have greatly improved our understanding of several diseases. Certainly, medical practice profited significantly from synthesis and application of numerous pharmaco-
logical agents that antagonize either the biosynthesis or pharmacological responses of endogenously generated angiotensin II. Ultimately, discovery of renin–angiotensin system led to many studies that resulted in therapies for vascular disease. This article briefly reviews research related to discovery of angiotensin and indicates importance of additional studies related to RAS.

ACKNOWLEDGEMENTS
None.

CONFLICT OF INTEREST
None.

ANSWER KEY

Part One
1.0, 2.the, 3.The, 4.the, 5.the, 6.o, 7.the, 8.o, 9.the, 10.a, 11.the, 12.o, 13.the, 14.o, 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, 42.the, 43.the, 44.the, 45.the, 46.the, 47.the, 48.a, 49.the, 50.the, 51.the, 52.o, 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.o, 66.the, 67.a, 68.o.

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.o, 84.the, 85.o, 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.o, 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.o, 120.o, 121.the, 122.a, 123.a, 124.the, 125.the, 126.the, 127.the, 128.the, 129.the, 130.the, 131.o, 132.the, 133.the, 134.o, 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.o.

Part Four
From 155. to 162.the.

REFERENCES