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 SUBJECT: *SUBJECT ANALYSIS AND CLASSIFICATION*
CATEGORY: *NLM Policy*
FORMAT: *Monographs, Serials, AV/CF, IR*

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I.   Introduction

I.A.   Philosophical bases of subject cataloging

Subject cataloging, like many library activities, is concerned mainly with organizing knowledge for effective use. The cataloger first determines the significant characteristics of a work and then translates the subject content into terms of the systems being used -- the notation of the classification scheme and terms selected from the library's authorized subject vocabulary. The nature of the work and library's policies guide the cataloger's decisions regarding specificity and depth of analysis and the individual library's organizing schemes determine the labels that are assigned to each item for the user.

I.B.   Functions of subject cataloging

The consistent application of subject headings and classification numbers is essential for orderly access to the collection and easy retrieval of similar materials. There are many ways in which to gather similar documents together: for instance, by topic ("What is it about?"); by publication type ("What genre or format is it?"); or by field of interest ("What is it for?"). The subject cataloger must decide which aspect is most important and useful, and assign subject headings and classification accordingly.

II.   Assigning Subject Headings

II.A.   Tools for subject analysis

      1.   Primary Tools

MeSH, the National Library of Medicine's controlled medical vocabulary thesaurus, is the primary tool used in subject analysis. It may be accessed online using the MeSH Browser.

        a.   MeSH Browser

The MeSH Browser (http://www.nlm.nih.gov/mesh/MBrowser.html) contains the complete MeSH medical vocabulary, additional cross references or entry terms, chemical names mapped to appropriate MeSH terms, scope notes or definitions for most MeSH terms, a list of allowable qualifiers (AQs) or topical subheadings which may be used with each term, as well as hot links to relevant sections of the *Indexing Manual* and *Technical Notes* (see below). There is a separate unit record for each MeSH term or descriptor. Additionally, each term is listed in a hierarchal "tree" structure, arranged from the most general to the most specific concept under broad subject categories.

        b.   MeSH introductory documentation

The Introduction to MeSH, accessible from the MeSH Home Page, http://www.nlm.nih.gov/mesh/, provides links to documentation explaining how the MeSH vocabulary is to be used and how to interpret the MeSH unit record. It also lists terms that have been added, deleted, or modified for the current year.

        c.   Use of Medical Subject Headings

The Use of Medical Subject Headings for Cataloging section of the Introduction to MeSH includes specific instructions for catalogers regarding the correct coordination of descriptors and subheadings, interpretation of the cataloging annotations in the MeSH record, and assignment of publication types.

Also included are instructions on how to construct the traditional subject heading string from subject headings as they appear in NLM's online public access catalog.

     2.   Secondary tools

        a.   *Indexing Manual*

This online manual (http://www.nlm.nih.gov/mesh/indexingmanual/IndexManual.htm)
outlines the general procedures followed in the subject analysis of articles in journals indexed by NLM. The Cataloging Section generally follows the Indexing Section's policies for assigning subject headings to the extent possible and practicable. Therefore, many chapters of the Indexing Manual (e.g., Chapter 19, "Qualifiers (Subheadings)") are also useful and informative for catalogers. The MeSH Browser provides links to the *Indexing Manual* in the format "Manual 19.7", and generally provides a hot link to the relevant chapter.

        b.   Technical Memoranda

These communications to Indexing Section staff augment the annotations found in the [MeSH Browser](#) and assist catalogers as well with the correct application of specific subject headings. They are stored online as part of the *[Indexing Manual](#)* at
http://www.nlm.nih.gov/mesh/indexingmanual/IndexManual.htm.

        c.   Technical Notes

These documents discuss practices relating to groups of concepts, and are intended to contain more specific information than that presented in the *[Indexing Manual](#)*, while not duplicating the detailed guidelines available in [MeSH](#) annotations. The [MeSH Browser](#) provides references to the Technical Notes in the format "TN 228."

Note: Technical Notes are no longer being issued. Information from existing Technical Notes is being incorporated into the *[Indexing Manual](#)* as resources permit. However, the current [MeSH Browser](#) continues to include references to relevant existing Technical Notes.

      3.   Other resources

        a.   *Dorland's Medical Dictionary*

This dictionary provides the spelling, meaning, and derivation of specific medical terms.

        b.   *Library of Congress Subject Cataloging Manual*

This manual, available online as part of the "LC Catalogers' Desktop"[1], provides guidelines for assigning subject headings to library materials. It emphasizes procedures in practical terms, so it is especially useful to libraries engaged in cooperative projects with the Library of Congress.

NLM uses this manual primarily as a reference tool to compare subject cataloging practices.

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1 Available online via a subscription through the LC Cataloging Distribution Service (see http:/www.loc.gov/cds/desktop/).

II.B.   General policies

    1.   When to assign subject headings

Assign subject headings, as appropriate, to all materials being cataloged by NLM.

    2.   Determination of primary/secondary subjects

Identify the subject headings assigned to an item as either primary or secondary, according to these definitions.

The primary heading or headings represent the main topic of the item being cataloged, and in combination with a publication type, if applicable, lead to the assignment of a particular classification number for the item. A direct link between the primary subject heading(s) and the classification number can be established in the majority of cases (excluding, for example, the primary subject of an individual analytic of an analyzed multipart set).

Prefer one primary subject heading per item. In cases where the main topic of the work cannot adequately be covered by one primary heading (e.g., there is no single pre-coordinated subject heading, or main heading topical subheading combination available that links to an appropriate classification number), two or three primary subject headings may be assigned. For example, a work on fire prevention in hospitals requires the coordination of the MeSH term *Fires* qualified by prevention & control, and the MeSH term *Hospitals*, to link to the appropriate classification choice, "WX 185," used for hospital safety, fire and disaster programs in the NLM classification scheme.

All other subject headings, not directly linked to the classification number chosen, are identified as secondary subject headings.

    3.   Order of subject headings

List subject headings in order of their importance: primary subject heading(s) first, followed by any secondary subject headings.

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II.C.   Assigning MeSH terms

Assign subject headings that accurately and completely describe the contents of the item. Cover all important aspects of the item, without redundancy. To the extent possible, use the most specific subject headings that apply. Use judgment in determining whether subject access should be provided for preliminary or background information (e.g., chapter(s) on the anatomy or physiology of a system, in a work about diseases of that system).

For serials and incomplete multipart items (i.e., in cases where NLM does not yet own all volumes), use judgment in determining how specific the subject analysis should be. Examine the volume(s) being cataloged to discover any available information about forthcoming volumes. If it appears that the volumes will cover a wide range of subjects, prefer one or two general subject headings to a great many specific headings.

Generally do not assign terms that have a broader or narrower relation to each other, even if they are treed in different places (e.g., *Health Services*, in N2 and *Delivery of Health Care*, in N4).

Use judgment in applying both broad and narrower terms from the same tree. Using both broad and narrower terms from the same tree may be appropriate in cases where half the content of the material is very general or applies to the tree as a whole, but special emphasis in the work is given to one or two narrower concepts.

It may sometimes be appropriate to assign the same MeSH term two or three times in a bibliographic record, qualified by different topical subheadings, to bring out specific aspects of the topic discussed. It may also be appropriate to assign the same MeSH term once without qualification and again with a topical subheading, when half the content is about the MeSH term in general and the remainder is about one or two specific aspects of the subject.

In general, do not assign a subject heading for the audience or purpose for which the work is intended unless the content includes material specific to the audience or purpose. For example, the MeSH term *Dentistry* should not be assigned to a general work entitled *Physiology for Dentists* unless it includes specific information related to dentistry. However, *Dental Care* or a similar term would be appropriate to another work with the same title that does include information on how physiology specifically relates to dental procedures. This same principle applies to material written for a particular purpose. For example, the MeSH term *Education, Continuing* should not be assigned to an item intended to be used in a continuing education course, unless it also discusses how to design a continuing education course or provides other information on the specific concept of continuing education.

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Use judgment in assigning patient care terms (e.g., *Ambulatory Care*, *Aftercare*, *Palliative Care*, etc.) as coordinates to specific disease, procedural, or therapy terms. Generally restrict the use of these terms to cases where (1) the care is unusual in the specific situation; or (2) the care is specifically discussed in detail.

         1.   Main headings

Main headings, or major descriptors, represent the subject content of items being cataloged. For very general works, one or two main headings may reflect the content completely. For more specialized works, subheadings may be added to pinpoint specific aspects of the concept represented by the main heading.

Assign the most specific heading or headings available that describe the contents of the work. Applying the following guidelines, use as many specific main headings as needed to cover the major subject content of the work. That is, assign specific headings, as needed, to cover what is discussed, not merely mentioned.

Up to three individual specific MeSH terms, which are indented under the same broader heading, may be used. If more than three specific terms in the same tree are needed, assign the broader heading instead. This applies only to MeSH terms that are found in the same tree. In all other cases, assign specific MeSH headings as needed.

Read MeSH annotations and scope notes and examine the tree structure carefully to determine whether a term is defined as a disease, specialty, procedure, or other concept, and for guidelines suggesting other appropriate terms.

For example, the MeSH term *Thoracic Surgery* represents the surgical specialty. The MeSH annotation says "SPEC" and leads the user to the term *Thoracic Surgical Procedures* which should be used for the procedure.

Carefully consider whether a work is about a disease or a specialty or both. One book entitled *Textbook on cardiology* might be about heart diseases and related disorders. The appropriate MeSH term for that work is *Heart Diseases*. Another book with a similar title might be about cardiology as a field or profession, covering such topics as trends, history, economics, and education. The appropriate MeSH term for that work is *Cardiology*. That is to say, if the subject matter is about the disease or diseases, use the disease heading(s) along with any appropriate therapeutic or procedural terms. If the subject content is about the profession or field, use the specialty heading. If both disease and specialty concepts are discussed, use both terms.

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Note: in a very few cases, a specialty term may be used for diseases as well, when no specific disease term exists. Read MeSH annotations carefully to determine whether a specialty term may be used for a disease or other concept or whether a related disease term is available.

Examples: **Pediatrics** is annotated "SPEC; when permitted for 'pediatric dis" with a link to the *Indexing Manual* for more specific instructions. It may be used for pediatric diseases for which no appropriate MeSH term is available. **Cardiology** is annotated "SPEC" and is used only for the specialty. See Related references are provided for specific diseases. **Aerospace Medicine** is annotated "SPEC; med, physiol or psychol aspects of aviation go here." A link to the *Indexing Manual* is provided for a more detailed explanation.

When a pre-coordinated organ-disease concept does not exist in MeSH, coordinate the organ term and the most specific disease term available. For example, since no MeSH term exists for diseases of the **Cystic Duct**, and **Cystic Duct** trees under **Bile Ducts**, cystic duct diseases are represented by the coordination of **Cystic Duct** and **Bile Duct Diseases**. Cystic duct neoplasms are represented by the coordination of **Cystic Duct** and **Bile Duct Neoplasms**. In some cases, the MeSH annotation provides coordination instructions; however, the principles of coordination apply, even when there is no instructional annotation.

Do not confuse organisms with the diseases they cause. For example, **Salmonella** is a type of bacteria and is treed in B3 (Organisms-Bacteria). The MeSH annotation provides the information "infection = **Salmonella Infections** or its specifics." For the disease concept use **Salmonella Infections**" or a more specific term which trees under **Salmonella Infections**.

For biographies, assign the MeSH term for the appropriate class of persons, e.g., **Physicians** or the relevant specialty. For example, use **Surgery** for a biography about a surgeon. Add personal names as subjects for single or collective biographies covering up to three people. Use judgment about adding names as subjects for more than three people in unusual situations. Use also the publication type **Biography** or **Personal Narratives** as explained in the section "Special Instructions for the Use of Certain Publication Types."

The terms **History of Medicine**, **History of Dentistry**, and **History of Nursing** are used for very general works on these topics. Works on the history of specific topics are represented by the most specific term available, qualified by the topical subheading *history*. For example, a work on the history of **Psychoanalysis** is represented by the MeSH term **Psychoanalysis** qualified by *history*. (See also *II.C.2 Topical Qualifiers/Subheadings*)

For works about the **History of Medicine** or a more specific historical topic in a particular time period, coordinate the historical term with the appropriate time period (e.g., **History, Medieval; History, 16th Century**).

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EXAMPLES:

A general work on the ***History of Medicine*** in ancient times is represented by coordination of the subjects:

> 650 12 $a ***History of Medicine***
> 650 22 $a ***History, Ancient***

A work on the history of obstetrical practices in the 18th century is represented by the coordination of the subjects:

> 650 12 $a ***Obstetrics*** $x history
> 650 22 $a ***History, 18th Century***

Use caution in assigning MeSH terms that have the Indexing annotation "never IM." In cataloging, it may be appropriate to use these terms in some situations; consider carefully whether the concept is significant enough in the content to deserve subject access. It is the cataloger's responsibility, not only to help the user find appropriate material on any given subject, but also to help the user eliminate material that merely mentions, but does not discuss the desired topic.

Generally, headings annotated: "Not used for indexing" should not be used by catalogers, with the exception of specified manifestation headings, (e.g., ***Eye Manifestations***, ***Neurologic Manifestations***, etc.) that are used by catalogers.

Headings annotated: "Check tag only" (e.g., ***Male***, ***Female***, ***In Vitro***, etc.) are not used by catalogers. Headings that may be used either as a check tag or as a MeSH concept are annotated "NIM as check tag" along with specific instructions for use. These terms, which include age groups and ***Pregnancy***, are used in cataloging.

The MeSH Browser also contains records for chemical substances which are not included as descriptors in the MeSH vocabulary. These supplementary concept records are not considered main headings or used as subject headings. In assigning a main heading, use the MeSH term that appears in the field labeled "Heading Mapped to." Supplementary concept records are easily recognized because the substance is provided in lower case letters.

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EXAMPLE:

> Name of substance: salicin
> Heading Mapped to: ***Benzyl Alcohols***
>
> 650 1 $a ***Benzyl Alcohols***

Age group MeSH terms and Pregnancy are entered on bibliographic records as main headings. They may function either as primary concepts or as secondary concepts, in coordination with other MeSH terms, to specify the age group or state of pregnancy in relation to the other term.

When a term designating an age group or pregnancy is the primary focus of a work, it is coded as a primary heading. For example, for a work about a newborn infant as a physiological, psychological, or social entity, code the MeSH term ***Infant, Newborn*** as a primary heading. Also code these terms as primary when the classification choice is dependent on the coordination of the age group or pregnancy with another primary concept. (See III.C.1.d. Topics coordinated with Age Groups and Pregnancy) Use allowable qualifiers as appropriate with both primary and secondary age group and pregnancy concepts.

EXAMPLES:

> 060 10 $a WS 463
> 650 12 $a ***Infant, Newborn*** $x psychology
> 650 12 $a ***Infant, Newborn*** $x physiology
>
> 060 10 $a WT 150
> 650 12 $a ***Mental Disorders***
> 650 12 $a ***Aged***
>
> 060 10 $a WQ 240
> 650 12 $a ***Mental Disorders***
> 650 12 $a ***Pregnancy***

When the scope of a work is limited to particular geographic areas, assign the appropriate MeSH geographic name headings (in MARC 21 field 651). Only geographic terms found in MeSH are valid for use as geographic subjects.

The topical subheadings *ethnology* and *epidemiology* may be used with geographic name headings when appropriate.

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Do not use geographic headings unless the content is limited to a particular area or areas. For example, do not use **Wisconsin** or **United States** for a study performed in a Wisconsin hospital, unless the discussion is limited to what happens in Wisconsin, or with the broader heading, what happens in the United States.

In general, use a maximum of three geographic headings on a bibliographic record. When more headings seem important for retrieval purposes, four may be used. Consider also using a broader heading if one is available. For example, use **Europe** when four or more European countries are discussed. Use Appalachian Region when four or more states treed under **Appalachian Region** are discussed.

Use geographic headings, whenever applicable, for individual and collective biographies and autobiographies when the assigned subject headings include a specialty or named group.

Geographic headings append to all assigned subjects in distribution.

For instructions on using geographic names as corporate subjects, see II.D.5.Geographic names.

      2.   Topical Qualifiers/Subheadings

Topical qualifiers or subheadings are used to narrow the focus of a main heading to a particular aspect of the subject, such as the *diagnosis* or *therapy* of a disease, the *physiology* or *pathology* of an organ, *metabolism* of a drug, or *economics* of providing a service. Assign the appropriate subheadings as required by the content of the work being cataloged, subject to the scope notes and annotations for the main term and subheadings, and according to the guidelines provided below.

Note that the list of allowable qualifiers (AQ) contains all the subheadings that are permitted with a given heading. Generally, no more than three topical subheadings are used with a single main heading. If more than three aspects of a main heading are discussed, choose broader subheadings from the Topical Subheading Hierarchies list, accessible from the online Introduction to MeSH at http://www.nlm.nih.gov/mesh/meshhome.html.

For example, use the broader subheading *physiology* for a work that discusses the *genetics*, *immunology*, *metabolism*, and *physiopathology* of a topic; use *therapy* for a work that discusses *diet therapy*, *drug therapy*, *nursing*, and *surgery* for a given condition. When a work is so broad that more than three subheadings are appropriate, even when the subheading hierarchy is considered, use the main heading without subdivision.

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See references and annotations frequently link to related terms that are to be used in place of, or in addition to, a main heading or main heading subheading combination. Pre-coordinated terms to be used in place of a Main Heading/subheading combination are identified as "entry combinations" (EC) in the MeSH record. Annotations also lead to appropriate specialty terms (e.g., *Nervous System*/physiol as a SPEC = *Neurophysiology*; *Nervous System*/surg as a SPEC = *Neurosurery*, etc.).

Treat annotations such as "coord with organ /physiol" as guidelines on the correct subheading to use if pertinent, rather than as absolute instructions to be followed automatically.

Consider using complementary subheadings, when appropriate. For instance, if a work discusses both the *adverse effects* of a substance and the diseases the substance causes, assign subject headings that bring out both these aspects, (e.g., *Substance* $x *adverse effects* and *Disease* $x *etiology*). Refer to the *Indexing Manual*, Chapter 19, at http://www.nlm.nih.gov/mesh/indexingmanual/IndexManual.htm, for a listing of common coordinations of subheadings that can be useful in retrieval.

In distinguishing between the qualifiers *adverse effects*, *poisoning*, and *toxicity*: use the qualifier *adverse effects* for unintended harmful side effects of a substance or procedure in normal use; use the qualifier *poisoning* for severe or life threatening systemic effects of a substance, whether through environmental exposure, overdose, accident, or error; use the qualifier *toxicity* for experimental studies on the effects and margin of safety of drugs, chemicals, and environmental agents, and for non life threatening exposure to environmental agents.

Use the qualifier *epidemiology* for items that discuss distribution of disease and factors which cause disease, as well as for surveys and morbidity in certain geographic areas. The content may include discussion of incidence, frequency, prevalence, and/or endemic and epidemic outbreaks. Apply the qualifier *epidemiology*, with the pertinent geographic heading, when *epidemiology*, *ethnology*, or *mortality* are used as topical subheadings with disease terms.

Use the qualifier *ethnology* with diseases and selected terms for ethnic, cultural, and anthropological aspects and with geographic headings to indicate the place of origin of a group of people living outside their native land. Coordinate with the geographic heading subdivided by the qualifier *epidemiology* to indicate diseases in the place the ethnic group is currently living.

EXAMPLES:

For a work on alcoholism in Inuits living in Alaska:

650 12 $a *Alcoholism* $x ethnology
650 22 $a *Inuits*
651   2 $a *Alaska* $x epidemiology

For a work on diabetes in Mexicans living in England:

650 12 $a ***Diabetes Mellitus*** $x ethnology
651 2 $a ***Mexico*** $x ethnology
651 2 $a ***England*** $x epidemiology

Note that *epidemiology* and *ethnology* are the only two subheadings that can be used with geographic (651) subject terms

Do not use the general headings ***Ethnic Groups*** or ***Continental Populations Groups*** when the topical subheading *ethnology* is used; however, if a specific ethnic or population group is discussed, add the appropriate term. If the qualifier ethnology is not allowed with the pertinent main heading(s), coordinate with ***Ethnology*** as a main heading.

Use the qualifier *legislation & jurisprudence* for laws, statutes, ordinances, or government regulations, as well as for discussion of law, legal controversy, and court decisions. When *legislation & jurisprudence* is not allowed with a particular main heading, for text or discussion of law, coordinate with an appropriate legislation main heading, such as ***Legislation*** or ***Legislation, Drug*** or ***Legislation, Food***. Coordinate with ***Jurisprudence*** as a main heading for works on the application of the principles of law or discussion of court cases. Additionally, use the publication type ***Legislation*** when 20% percent or more of the content consists of the text of law. Use the publication type ***Legal Cases*** for works consisting of reports of decided cases and documents related to those cases.

The qualifier *history* is used for works discussing the historical aspects of a subject. It is not used for materials on a topic written as contemporaneous works or for reprints of such works, simply because they are old.

EXAMPLES:

For a work describing the history of military nursing during the American Civil War, written in 2003, use:

650 10 $a ***Military Nursing*** $x history
650 12 $a **American Civil War**

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For a work on nursing in the Confederate Army of Tennessee published in 1866 and reprinted in 1998, use:

650 10 $a *Military Nursing*
650 10 $a *American Civil War*
651   2 $a *Tennessee*

In distinguishing between the qualifiers *metabolism*, *pharmacokinetics*, and *pharmacology* as subheadings under drug terms: use the qualifier *metabolism* for discussion of what the body does to a chemical; use the qualifier *pharmacokinetics* for a discussion of how an exogenous chemical travels through the body; use the qualifier *pharmacology* for the chemical's effect on the body.

Use the qualifier *statistics & numerical data* with non disease terms for expressions of numerical values which may be provided in graphic, tabular, or narrative form. For works that cover statistical aspects of a disease, use topical subheadings *epidemiology*, *ethnology*, or *mortality*, as appropriate. Other topical subheadings are also used to cover statistical information on specific subjects. For example, for statistics on economic aspects of a particular subject, use the qualifier *economics*. Other topical subheadings used for statistical data include *manpower*, *supply & distribution*, and *utilization*. Consult the subheading scope notes in the [MeSH Browser](#) and Chapter 19 of the [Indexing Manual](#) for guidance on selecting the subheading appropriate to the particular aspects encompassed in the work being cataloged and verify that the selected term is an allowable qualifier with the pertinent main heading. When *statistics & numerical data*, or a more specific statistical subheading, is needed with a term for which it is not an allowable qualifier, coordinate with **Statistics** as a main heading. Additionally, use the publication type **Statistics** when 20% or more of the content consists of statistical data. Also use the publication type **Tables** when 50% or more of the material is presented in tabular form.

Use judgment in deciding whether to use the subheadings *radiography*, *radionuclide imaging*, *surgery*, and *ultrasonography* with an organ term or with the precoordinated organ disease or injury term. If the work being cataloged discusses investigation of complaints or symptoms that may be indicative of a disorder, generally use the organ term. If it is known that a disorder is present, use the pre-coordinated disease or injury term. In some cases, both terms may be appropriate.

Consider coordinating a general subheading with a more specific main heading to bring out the specific aspect of the subheading discussed. For example, for a work discussing microsurgery of the lens, coordinate the subject heading **Lens, Crystalline** $x *surgery* with the main heading **Microsurgery**. However, do not coordinate a specific subheading with a more general main heading (e.g., do not use the general [MeSH](#) concept **Diagnostic Imaging** in coordination with a main heading qualified by the more specific subheading *ultrasonography*).

3.   Genre/Publication Type Headings

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Genre/publication type headings are used to indicate what an item *is* as opposed to what it is *about*.

The complete list of publication types with scopes notes is found in the online Introduction to MeSH at http://www.nlm.nih.gov/mesh/meshhome.html. Publication types appear as the "V" tree of the MeSH vocabulary and may be searched using the MeSH Browser.

All publication types in the MeSH vocabulary may be used by catalogers unless they are annotated "CATALOG: do not use" or "Not used for indexing or cataloging" or there is an annotation restricting usage such as "CATALOG: do not use for current materials."

Assign appropriate genre/publication type headings according to the scope notes. Multiple publication types may be assigned. If more than one publication type heading is applicable, assign them in order of importance, i.e., the one that corresponds to the classification form number should be listed first (see section III.E.2.General Guidelines for the Use of Form Numbers).

It may be appropriate to repeat a MeSH term, used once with and once without a publication type. For example, for a work on *Liver Diseases*, where half of the text provides substantive information in addition to describing illustrations, and half consists of pictorial works, use *Liver Diseases* once qualified with the publication type, *Atlases* and repeat the term unqualified. For a work that gives both biographical information and history of the person's field, use the specialty heading once without any topical subheading. Append the publication type *Biography* or *Personal Narratives*. Repeat the specialty heading with the qualifier history and do not append the publication type.

When NLM records are distributed to licensees, publication types append to the existing subject strings as 650 $v. To prevent a publication type from appending to a particular subject heading, NLM uses the coding $9 n after the subject heading.

EXAMPLES:

        650 12 $a *Liver Diseases*
        650 22 $a *Liver Diseases* $9 n
        655   2 $a *Atlases*

        650 12 $a *Physicians*
        650 22 $a *Epidemiology* $x history $9 n
        655   2 $a *Biography*

> 650 12 $a *Surgery*
> 650 22 $a *Surgery* $x history $9 n
> 655   2 $a *Biography*

Special Instructions for use of Selected Publication Types

• *Atlases*: Use for collections of illustrative plates, charts, etc. and for items in which there are both illustrations and text, even when the text predominates, when the purpose of the text is to explain the illustrations. Do not use for geographic atlases or maps. For maps, use the publication type *Maps*.

• *Case Reports*: Use for reports of clinical cases in connection with diseases or medical specialties, as well as for single case reports in clinical medicine. Do not use for institutional case reports. Use instead the MeSH topical heading *Organizational Case Studies*.

• *Catalogs*: Use for works consisting of lists of items arranged in some definite order, which describe the resources of a collection, including the holdings of a library, items in a museum, etc. Catalogs also include lists of materials prepared for a particular purpose, such as exhibition catalogs, sales catalogs, medical supply catalogs, etc.

• *Collected Works*: Use for collections of articles that are identified as having been previously published in one or more sources.

• *Congresses*: Use for proceedings of a conference, works that are "based on a conference" or that consist of "expanded (updated) papers from a conference," or "abstracts of papers from a conference." For works that are "based partly on a conference" or identified as an "outgrowth of a conference," use judgment in determining whether the work contains substantial material from the conference and assign or omit the publication type *Congresses* accordingly. If the item contains only one or two papers originally presented at a conference or a personally authored summary of a congress, do not use the publication type *Congresses*. In case of doubt, do not assign the publication type *Congresses*.

• *Dictionary*: Use for reference works containing lists of words, usually in alphabetical order, giving meaning, and frequently including information about form, pronunciation, etymology, and grammar. Use with relevant specialty main headings for comprehensive lists of terms important in special fields. See also *Encyclopedias* and *Terminology*.

• *Encyclopedias*: Use with relevant specialty main headings for reference works containing informational articles, usually arranged in alphabetical order.

• *Essays*: Use for collections of articles that have not been previously published, and that are identified by the author or editor as "essays." Use *Collected Works* for collections of previously published articles.

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• ***Exhibitions***: Use for works describing an exhibition.   Use the MeSH term ***Exhibits*** with the publication type ***Catalogs*** for exhibition catalogs.

• ***Legislation***: Use for text of laws, statutes, ordinances, or government regulations. Do not use for works that are merely discussion of laws.

• ***Nurses' Instruction***: Use for background material on diseases and other topics written for a nursing audience, which do not include specific nursing procedures. Do not use as a substitute for the topical subheading nursing when that subheadings is not an allowable qualifier for a given [MeSH](#) term. Instead, coordinate with the main heading ***Nursing Care*** or another appropriate nursing term. Do not coordinate ***Nurses' Instruction*** with other nursing concepts and do not append ***Nurses' Instruction*** to any main heading or main heading subheading combination that already contains the terms "nurse" or "nursing."

• ***Personal Narratives***: Use for single as well collections of autobiographical accounts and personal reminiscences. Do not confuse with the [MeSH](#) topical subject ***Autobiography***, which is used only for works about ***Autobiography***.

• ***Phrases***: Generally used for works for non-native speakers of a language, containing common terms, phrases, idioms, and typical conversations, e.g., between a health professional and patient. See also ***Terminology***.

• ***Statistics***: Use when 20% or more of the content consists of statistical data.

• ***Tables***: Use for any kind of data that is presented in tabular form. For statistical data presented in tabular form, use both ***Statistics*** and ***Tables***.

• ***Terminology***: Use for technical terms or expressions used in a specific field. These lists may or may not be formally adopted or sanctioned by usage. See also ***Dictionary*** and ***Phras*es**.

Publication Types with Restricted Usage

The following publication types are used in the cataloging of historical materials, archival films, and reprints and facsimiles of items first published or produced before 1914. They may also by used by NLM collaborative partners, but are not used by NLM catalogers for current materials.

>   ***Academic Dissertations***
>   ***Addresses***
>   ***Animation***
>   ***Annual Report***
>   ***Documentaries and Factual Films***

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Fictional Works
Herbals
Instruction
Textbooks

4. Language Subheadings

Language information is recorded in MARC 21 field 041. In distribution, the language(s), encoded in MARC 21 field 041 $a, append to the subject string (MARC 21 field 650) in subfield $x when any of the following publication types are used: *Dictionary, Encyclopedias, Phrases,* or *Terminology*.

II. D. Assigning other subject added entries

Assign subject access, as appropriate, for any names or uniform titles discussed in the work being cataloged. The headings for these names must be created according to cataloging rules and practices, in conformance with the latest revision and updates of the *Anglo-American Cataloguing Rules, 2nd ed.*, *(AACR2)* and established in the NLM authority file. Do not use corporate names or uniform titles from the MeSH vocabulary. In MeSH, these types of headings are generally annotated "CATALOG: use NAF entry". [If a name or uniform title is not so annotated, bring it to the attention of a Cataloging Section MeSH representative.]

Note also that the names of some specific laws are included in the MeSH vocabulary. These terms are not used by catalogers and are annotated "CATALOG: use NAF entry". Catalogers are to enter laws as subjects using the appropriate jurisdiction name as a corporate subject (MARC 21 field 610) with the authorized name of the law provided in $ t.

Do not use topical subheadings with corporate, personal name, or uniform title subject added entries.

Generally coordinate with the appropriate MeSH term for the type of corporate entity, named group, or specialty, with applicable subheadings.

EXAMPLES:

Assign subjects to a history of the American Academy of Nursing as follows:

610 22 $a American Academy of Nursing
650   2 $a *Societies, Nursing* $x history

Assign subjects to a biography of Michael DeBakey as follows:

600 12 $a DeBakey, Michael E. $q (Michael Ellis), $d 1908-

===

650 12 $a *Cardiology*
655   2 $a *Biography*

Assign subjects to a work about the National Institutes of Health as follows:

610 22 $a National Institutes of Health (U.S.)
650 12 $a *United States Government Agencies*

1. Personal names

For works that are about an individual and/or the individual's work, assign the appropriate heading for that person in correct AACR2 format in MARC 21 field 600. In cases where a MeSH term exists for the person's theories (e.g., *Jungian Theory*), use judgment in determining whether both the MeSH term and the heading for the person are appropriate.

2. Corporate names

For works that discuss a corporate entity, assign the appropriate heading for that corporate name in correct AACR2 format in MARC 21 field 610.

When a work discusses a corporate body that has undergone name changes over time, generally assign only the heading used by the body during the latest period covered by the work being cataloged. If the body was well known by an earlier name and that name is featured prominently as a subject of the work, assign the heading for the earlier name as well.

Generally do not assign corporate subject access to a work about the holdings of a corporate body. Rather, assign a main or added entry for the corporate name, since the body is the source (author) of the holdings.

3. Conference names

For personally authored or edited works about a conference, not authorized by the conference committee, assign the heading for the conference name, in MARC 21 field 610 or 611, as appropriate, in correct AACR2 format. Do not use the publication type *Congresses*.

4. Uniform titles and Name/Title entries

For works that discuss another bibliographic work (e.g., a criticism or explication, etc.), assign the appropriate heading for the uniform title in correct AACR2 format. Enter it as a uniform title subject (in MARC 21 field 630) if the work itself is entered under title according to AACR2 rules. If the work itself is entered under a personal, corporate or conference name, enter the uniform title in $t in the appropriate 6XX field for the author as subject.

5. Geographic names

In the rare instance of a work that discusses only a geographic entity (e.g., an area handbook or statistical survey of one area, with a title such as *Area Handbook for Zambia*), assign the appropriate heading for the geographic name as a corporate subject in correct AACR2 format in MARC 21 field 610. However, distinguish between items that actually discuss the geographic entity and those that merely identify a geographic aspect of a MeSH concept, e.g., *Malaria control in Botswana*.

II. E. Special situations in subject cataloging

1. Editions

In general, revised editions of a work are assigned the same subjects as those used on the previous edition, unless one or more of the exceptions below apply.

Exceptions:

• When the scope and content of the material has changed, assign subjects appropriate to the current edition.

• When more specific MeSH terms have been added to the MeSH vocabulary, assign the most specific terms available that are appropriate to the new edition.

• If cataloging policies have changed, follow the policies in effect at the time of cataloging the current work.

• If the previous edition was given limited cataloging and the current edition is being cataloged at the full or core level, assign all subjects appropriate for full or core level cataloging.

Note: If no subject is coded primary on the bibliographic record for the previous edition, do not assume that the first listed subject was intended to be the primary subject. Determine the primary subject based on the current work.

Do not change subjects used on an earlier edition to match those used on the new edition if the earlier edition was correctly cataloged according to policies and available MeSH vocabulary at the time of cataloging. Use judgment in determining whether cataloging should be revised if it was incorrectly done according to the rules and subjects available at the time of cataloging. Correct egregious errors.

    2. Translations

In general, translations are assigned the same subjects as those used on the original work, unless one of more of the exceptions below apply.

    Exceptions:

    • When new more specific MeSH terms have been added to the MeSH vocabulary, assign the most specific terms available that are appropriate to the translation.

    • If cataloging policies have changed, follow the current policies in effect at the time of cataloging the translation.

    • If the original work was given limited cataloging and the translation is being cataloged at the full or core level, assign all subjects appropriate for full or core level cataloging.

Note: If no subject is coded primary on the bibliographic record for the original work, do not assume that the first listed subject was intended to be the primary subject. Determine the primary subject based on the current work.

Do not change subjects used for the original work to match those used on the translation if the original was correctly cataloged according to policies and available MeSH vocabulary at the time of cataloging. Use judgment in determining whether cataloging should be revised if it was incorrectly done according to the rules and subjects available at the time of cataloging. Correct egregious errors.

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II.F.   NLM Subject Analysis -- Historical Practices and Changes

- Until the mid-1980s, NLM generally assigned subject headings only to materials published within twenty-five years of the date of cataloging. From the mid-1980s until July 1996, NLM restricted subject heading assignment to materials with imprints of 1914 or later. Subject headings were first assigned to reprint editions of 19th century materials (original imprints of 1801-1913) beginning in March of 1989. Until July 1996, subject headings were generally not provided for modern editions and criticisms of works originally published before 1801.

  Until 1966, subject headings were assigned to the following materials regardless of original imprint date: (a) reference materials, including individual or collective biographies, bibliographies, directories, etc.; (b) statistical documents; and (c) works about institutions, societies, etc.

  Subject headings are now assigned to all materials cataloged by NLM.

  Prior to the mid 1990s, subjects were listed alphabetically and the primary subject was not indicated.

- Beginning with the implementation of the 1999 MeSH and the Integrated Library System, the NLM Cataloging Section changed the internal structure of its subject strings to facilitate cross-file searching and provide consistent retrieval results in NLM's various web based databases. In conformance with indexing practice, catalogers began limiting qualification of MeSH descriptors to topical subheadings.

- Through 1998, geographic, language, and form subheadings were included in NLM's local subject string when applicable, and distributed to bibliographic utilities and other licensees in the same format as that used internally. Additionally, catalogers used topical subheadings to qualify relevant main headings with age groups or pregnancy, whereas indexers used check tags to convey these concepts.

  Catalogers began to provide age group and pregnancy terms as main MeSH headings in 1998, using the same terms as those used by indexers. At the same time, catalogers began to store geographic headings separately in the Geographic Name Field, MARC 21 field 651, and not as part of the subject string. Additionally catalogers discontinued providing a language subfield for dictionaries, encyclopedias, phrase books, and terminologies. A language code is provided separately in MARC 21 field 041, as well as in the fixed fields.

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Through 1998, form subdivisions were included as part of the subject string by NLM catalogers to indicate the physical or intellectual characteristics of a work, representing what the item is as opposed to what it is about. Additionally, form subheadings were used to indicate the physical carrier of an item, such as videocassette or audiotape. Form subheadings representing the genre of a work were replaced in 1999 by Genre/Publication type headings, provided in NLM bibliographic records internally in MARC 21 field 655 and local field 659. Physical carriers were not converted to publication types, but instead began to be represented in the coding and physical description of an item, no longer supplied in the subject heading string.

Although the internal subject structure for cataloging at NLM was therefore changed, NLM continued to provide its subject string in a more traditional form in records distributed to bibliographic utilities and most licensees. In NLM distributed records, age headings and publication types were combined with MeSH headings to produce a traditional subject string from 1999 through 2005.

- Notable changes in subject analysis practice took place in 2006 and are outlined below.

1.   Age Groups and Pregnancy

Beginning with the implementation of MeSH for 2006, age groups and pregnancy headings are provided in the same format on distributed records as in NLM's local files. Age groups and pregnancy are not appended to the subject string on distributed records.

Prior to 2006, when age groups or pregnancy were coded as *secondary* subjects (MARC 21 field 650 22) they were attached to other specially coded main headings or main heading and topical subheading combinations on records distributed to the bibliographic utilities, such as OCLC, and other NLM licensees. A local subfield ($9 a) was appended to the subject string in LocatorPlus (MARC 21 field 650 $9 a) as an instruction to the computer to attach age groups to the subject string on distribution.

2.   Publication Types

Beginning in 2006, all MeSH Publication Types (PTs) used in cataloging are entered in MARC 21 field 655 and may be appended to the subject string on distributed records.

Prior to 2006 a distinction was made between PTs which had previously functioned as form subheadings and those which had never been used as form subheadings. PTs which had never functioned as form subheadings were entered in NLM's local field 659 and not attached to the subject string on distributed records.

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NLM's local field 659 is no longer used. All MeSH PTs used by cataloging may be appended to the subject string as form subheadings (650 $v) on distributed records. A local subfield (650 $9 n) is appended to the subject string as an instruction to the computer to prevent PTs from attaching inappropriately on distributed records. For a fuller explanation and examples see: II.C.3 Genre/Publication Type Headings.

III. Assigning Classification

III.A. Basic Tools

1. NLM Classification

The *NLM Classification* is an alphanumeric scheme for the arrangement of library materials by broad subject categories, similar to that used by the Library of Congress (LC). The scheme is a system of mixed notation, where alphabetical letters denoting subjects are further subdivided by numbers. It covers medicine and related sciences, utilizing schedules QS-QZ, and W-WZ, ranges not used by LC.

The latest version of the *National Library of Medicine Classification* can be found at http://wwwcf.nlm.nih.gov/class/. It is updated annually.

See also the introductory material to the classification, which provides an explanation of classification practices, at http://www.nlm.nih.gov/class/nlmclassprac.html#Library.

2. Library of Congress Classification Schedule

The various schedules of the Library of Congress Classification are used to classify subjects peripheral to medicine and for general reference works.

Specifically, NLM uses LC classification for psychology, science, sociology, veterinary medicine, and other subjects bordering on medicine. LC's QM (Human Anatomy), QR (Microbiology), and R (Medicine) schedules are not used since they duplicate coverage of the NLM classification. QL (Zoology) and QP (Physiology) numbers are used only for works on wild animals. Works on human anatomy, physiology, etc., and on laboratory and research animals are classed in the appropriate NLM schedule. Works on domestic animals and veterinary medicine are classed in the appropriate LC schedules.

The LC classification schedules, LC Classweb, are available online by subscription at http://classweb.loc.gov/.

III.B. Basic Rules

      1. When to assign classification numbers

Assign a classification number to all print and non-print materials cataloged.

Beginning in January 1994, the majority of newly cataloged print monographs, exclusive of reference titles and materials destined for the History of Medicine Division, are assigned accession numbers for shelving in the NLM collection. In addition to the accession numbers, NLM also assigns an alternate fully shelflisted classification number for print monographs receiving full or core cataloging, as well as for serial analytics classed with the serial in the form numbers, W1 and W3 (see III.E.4.Serial Publications). A classification number, without cuttering or date, is assigned to remote access electronic resources and to items receiving limited cataloging. Microfiche issued by the Superintendent of Documents are assigned the SUDOC number for classification. An alternate call number is not provided.

      2. Principles of Classification

For print and non-print monographs, classed serials, electronic and integrating resources, the classification number assigned to a work is determined by the primary subject content or focus of the work and represents as closely as possible the primary MeSH heading or headings selected. Other materials and serials, in particular, are classified by form (see III.E.Special Rules and III.E.4.Serial Publications).

A work dealing with several subjects that fall within different areas of the classification is classed by emphasis, or if emphasis is lacking, by the first subject treated in the work.

A work on a particular disease is classified with the disease that, in turn, is classified with the organ or region chiefly affected, regardless of special emphasis on diet, drug, or other specific form of therapy or diagnostic procedure. However, if the work is about a drug, special form of therapy, diagnostic procedure, or environmental condition as a cause of disease, etc., and the disease is only mentioned in the context of the primary subject (the therapy, etc.), classify as always for the primary subject.

A work dealing with a particular region of the body or organ system is classified with the region or organ system, depending on the emphasis of the work. For example, a general work on the region of the *Head* and *Neck* is classified with the *Musculoskeletal System* in the **WE** schedule. However, when the emphasis concerns dental problems and procedures related to the mouth, teeth, and jaws, the work is classed in **WU** with *Dentistry*.   If the emphasis is concerns the otolaryngological problems and procedures, related to the ear, nose, and throat, the work is classified in the **WV** schedule with *Otolaryngology*. If the emphasis is on the *Brain* and associated organs, the work is classified in **WL** with the *Nervous System*.

In cases where there is an appropriate classification number in both the NLM and LC schedules, consider the emphasis of the work. For example, works on religious or social aspects of abortion are classified in the LC schedules. Works on medical aspects are classified in the NLM schedules.

If both social and medical aspects are discussed, prefer the NLM classification number.

In some cases, even though the majority of the content of a work falls outside the field of medicine, NLM classifies for the medical content judged to be of primary importance to the biomedical user community. For example, a general botany text that includes information on medicinal uses of plants is classified for medicinal plants or herbal medicine, not in the LC schedule.

Classify in the **WS** schedule works on diseases of specific body systems in children, as well as works on diseases limited to the newborn or premature infant. Classify works on anatomy or physiology of the child in **QS** or **QT**, works on topics other than body systems per se, with the topic (e.g., surgery of the child in **WO 925**), and works on specific diseases in children with the disease (e.g., pneumonia in infants in **WC 202**).

For materials that discuss both humans and animals, prefer classification with the human.

Generally class the reversal of a medical procedure in the same number as the procedure itself, if no separate number exists.

For class numbers where there is a detailed A-Z breakdown (e.g., Collective biography by specialty, **WZ 112.5**; specific DNA viruses, **QW 165.5**, etc.), when a specific number does not exist which represents the subject of the work being cataloged, classify the work by looking in the index to the classification for the MeSH term that is the next higher term in the MeSH tree.

EXAMPLES:

> The term **Mastadenovirus** is not provided in the classification index
> **Mastadenovirus** trees under *Adenoviridae*
> *Adenoviridae* is classified in QW 165.5.A3

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Classify works on **Mastadenovirus** in QW 165.5.A3

The term **Circoviridae** is not provided in the classification index.
Circoviridae trees directly under *DNA Viruses*
Since no A-Z number is provided for **Circoviridae,** works on **Circoviridae** are classified with the broader term *DNA Viruses* QW 165.

See also <u>III.C.General Procedures for Assigning Classification</u>.

For works that are biographical or autobiographical in nature, consider the emphasis of the work. If it is primarily an account of a professional person in a given medical or other related field, generally classify in **WZ 100**. If it is a personal narrative relating to an individual's experiences with a disease, specialty, etc., or, if there is generally a heavier emphasis on the subject than on the person, classify with the subject.

Always verify classification numbers that are found in the index with the actual listing in the schedules, since there may be annotations, expansions or other important information that can influence the choice of classification. It is important to read annotations, provided at the beginning of the range of numbers being considered, for instructions that apply to the schedule as a whole.

Geographic subdivision is provided for certain subjects and publication types in the NLM classification schedules by the application of Table G (see <u>Table G instructions</u> in section <u>III.C.1.e</u>.). The use of geographic breakdown is restricted to those classes which are annotated "Table G" and is appropriate for both monographs and serials. Table G information is recorded as part of the class portion of the call number. See further instructions in section <u>III.C.1.e</u>.

EXAMPLE: 060 00 $a W 84 AM3

        3. Structure of the classification number

When the classification portion of the call number consists of a single letter and a single digit, it is entered without any space (e.g., **W1**, **W2**, **W3**, etc.). All other classification numbers are entered with a space between the letters and the numbers (e.g., **W 4A, W 15**, **WB 1**, **WB 5**). See also "Shelflisting Procedures for Monographs and Classed Serials" at http://www.nlm.nih.gov/tsd/cataloging/shelf.html.

Note: This spacing convention also applies when NLM assigns a classification number from the LC classification schedule (see also III.D.2. Using the LC Classficiation Schedule).

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EXAMPLE:

> 060 10 $a HV 11
> 650 22 $a *Social Work* $x education

III.C. General Procedures for Assigning the Classification Number

The class number chosen should represent, as nearly as possible, the primary subject or subjects of the material being cataloged, as modified by a topical subheading when appropriate, or, in some cases, by the form or type of material being cataloged.

Selecting Classification Number for Primary Subject

> 1. Using the class schedule index

After assigning MeSH, look up the primary subject in the index of the NLM Classification.

> a. Specific Concepts

Some subjects may be indexed to a specific number (e.g.: **Reticulocytes** to **WH 150**).

Always refer to the main schedule to verify the number to be certain there are no annotations directing the cataloger, in specific circumstances, to use another number.

For example, Dental Materials is indexed to **WU 190**. The main schedule, at **WU 190**, contains the annotation, "General and those not classed in **WU 180**." Above this number in the schedule, **WU 180** contains the annotation "Dental alloys and metals." If the work is on dental metals, for which there is no MeSH term, it should be classed at **WU 180**.

> b. General Concepts

Subjects of a general nature are usually indexed to a section of the class schedule (e.g., *Mental Disorders* to **WM**) or a range of numbers (e.g., *Kidney Diseases* to **WJ 300-378**). Refer to the section of the class schedule to which the primary subject is indexed and select the most appropriate number. If the subject is not listed, or the primary focus of the work includes several subjects within the schedule, or is very general, select the class number annotated "General Works" (e.g., a general work on dentistry is classified in **WU 100**).

c. Classification Modified by Topical Subheading

When a topical subheading is used with the primary subject, check both the class schedule index and the main schedule to determine whether a specific number has been assigned to cover that *aspect* of the topic.

Whenever a main heading/topical subheading concept is indexed to a specific number in the class schedule that matches the primary main heading/subheading chosen, use that class number, unless a form number is required (see III.E.2.General Guidelines for the Use of Form Numbers). For example, a general work on *Kidney Diseases* is classed in **WJ 300**, but a work on *Kidney Diseases* qualified by diagnosis is classed in **WJ 302**. A general work on *Acquired Immunodeficiency Syndrome* is classified in **WC 503**. *Acquired Immunodeficiency Syndrome* qualified by therapy is classed in **WC 503.2**.

Always verify numbers selected from the index in the main schedules because there may be an appropriate specific class number that is not listed in the index to the classification. Read all annotations and examine the schedule for expansions.

EXAMPLE:

> In the index under *Kidney* the cataloger is led to **WJ 300-378**. Specific numbers for $x *anatomy* and $x *physiology* are not provided, but an examination of the schedule leads the cataloger to **WJ 301** for *Kidney* $x *anatomy* or **Kidney** $x *physiology*. The cataloger is led to the same range of numbers for *Kidney Diseases* as for *Kidney*, but must read the schedule to determine that *Kidney Diseases* $x *radiography* is classified in **WJ 302**.

d. Topics Coordinated with Age Groups and Pregnancy

Some subjects have specific classification numbers for particular age groups and the state of pregnancy. For example, general works on *Mental Disorders* are classified in **WM 140**, but general works on *Mental Disorders* in adolescents are classed in **WS 463**, in infants and children in **WS 350**, in the aged in **WT 150**, in pregnancy in **WQ 240**.

e. Applying Geographic Subdivision

Supply a "Table G" geographic Cutter for all classification numbers that are annotated "Table G" in the NLM Classification. Instructions for applying "Table G" geographic Cutter numbers are provided in the introductory material to the *NLM Classification* at http://www.nlm.nih.gov/class/TableGPractices.html. The "Table G" geographic Cutter tables are provided at http://www.nlm.nih.gov/class/TableGOutline.html.

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Note that most geographic Cutter numbers consist of two letters and one or more numbers; take care not to confuse a letter "I" with a number "1", or a letter "O" with a number "0".

Table G geographic Cutters represent the latest name of the geographic entity, when names have changed over time.

If there is no Table G geographic Cutter for a particular country, consult the Class Team Chair or designated Unit Head.

If the classification number selected to represent the primary subject is annotated "Table G", the cataloger must also provide one or more geographic headings in the MARC 21 field 651 representing the dominant area or areas discussed. If more than one geographic area is discussed, list first the geographic heading for the entity that is emphasized, and, in the absence of emphasis, to the one treated first in the work. (*See also* II.C.4. Geographic Headings.)

The Table G geographic Cutter number selected must correspond to the geographic heading provided in the first MARC 21 field 651 on the bibliographic record.

For every number in the schedule annotated "Table G", there is a corresponding number annotated "Not Table G" used for works on the same topic that have no geographic emphasis.

EXAMPLE:

> A work on the *Quality of Health Care* in *Maryland* is classified in **W 84 AM3**, whereas a work on the *Quality of Health Care* with no geographic emphasis is classified in **W 84.1**.

> A medical directory that includes listings primarily from one country and one or two other countries is classified in **W 22** with the appropriate Table G geographic Cutter for the predominant country. A medical directory that includes more than three countries is classified in **W 22.1**, if no one country predominates.

EXAMPLE:

> A directory listing physicians primarily in the United States, with a few listings for Canada is assigned the Table G geographic Cutter for the United States

> Do not use a Table G geographic Cutter with any classification number that is not annotated "Table G", even though the primary subject of the work to be classified may have a geographic emphasis for which a 651 geographic heading is assigned.

For numbers that provide both Table G/Not Table G options, if a MARC 21 field 651 Geographic Heading is not used, select the classification number annotated "Not Table G".

f. Using LC Classification Numbers Referenced in the NLM Class Schedule Index

If the primary subject chosen falls outside the field of medicine, the NLM class schedule index may refer the cataloger to a number or range of numbers in the LC classification schedule. When the primary subject is indexed to a range of numbers, check the range and select the most appropriate number within it. If the subject is indexed to a single specific number, verify the LC schedule to be sure the number is still appropriate. Portions of the LC schedule have been updated since the publication of the latest NLM schedule.

III.D. Selecting a Class Number when the MeSH term is Not Listed in the NLM Class Schedule Index

1. Using the *MeSH Tree Structures*

Check medical terms, names of drugs, etc., in the "Tree" of the MeSH Browser to locate the broader term under which the primary MeSH term is treed, and generally assign the classification for the broader term.

EXAMPLE:

The MeSH term *Parasomnias* is not in the NLM class index. The term is found in the Tree Structures under the broader term *Sleep Disorders*. *Sleep Disorders* is indexed to **WM 188**. Classify *Parasomnias* in **WM 188**.

To be certain that the classification for the broader term is appropriate, read the scope note for the chosen term and for that of the next higher term in the tree. Compare the context in which the term is used in the item being cataloged with the MeSH scope note and tree category. Use judgment in determining whether the classification for the next higher term is appropriate.

When a term is in multiple trees, consider the context in which it being discussed and the most important characteristic of the subject. For example, *Cockayne Syndrome* trees under both *Dwarfism* and *Neurodegenerative Diseases*. In determining the appropriate classification, consider the most important aspect of the topic discussed and classify for that aspect.

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Special care must be used in classifying drugs and chemicals. Often the term or the next higher term in the tree leads to a number in LC's chemistry schedule (QD) or NLM's biochemistry schedule (QU). If the context of the work is about the action of the substance and not its chemical makeup, coordinate with the appropriate Pharmacologic Action term (e.g., **Anti-Bacterial Agents, Anti-Allergic Agents**, etc.), code both subjects primary and classify for the type of agent.

EXAMPLE:

> *Natamycin* trees under **Macroslides** (neither term appears in the index), which in turn trees under **Lactones**. **Lactones** is indexed to a number in QD in LC's chemistry schedule. However, if the item being cataloged is about **Natamycin** as an antifungal antibiotic and not about its chemical makeup, it should be classed with **Antibiotics**, **Antifungal** in **QV 252**.

When a chemical is discussed as treatment for a specific disease, class with the disease.

When a chemical is discussed as a multipurpose drug, beneficial in the treatment of many diseases, coordinate with **Pharmaceutical Preparations** and class at **QV 55.**

When the chemical discussed is from a plant coordinate with the appropriate plant term, e.g., **Plant Preparations**, **Plant Extracts**, or **Phytotherapy**, and class for the plant term.

EXAMPLE:

For a work on multiple therapeutic uses of a preparation made from **Salix,** a substance which comes from willow bark.

> 060 10 $a **QV 766**
> 650 10 $a **Salix**
> 650 10 $a **Plant Preparations** $x therapeutic use
>
> 2. Using the LC Class Schedule

For terms outside the fields of medicine, not listed in the NLM class schedule index, search for an appropriate class by checking the primary subject or a similar term from LC Subject Headings in LC's class schedule and indexes.

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III.E. Special Rules

      1. Bibliographies, Abstracts, and Indexes

For bibliographies, abstracts (the publication type used for annotated bibliographies), and indexes falling within the scope of the NLM class schedule, use the appropriate subject oriented NLM class number prefaced by the letter "Z".

For example, works on *Chronic Disease* are classified in **WT 500**. A bibliography of works on *Chronic Disease* is classified in **ZWT 500**.

Works falling outside the scope of NLM's class schedule are classed in LC's Z Schedule.

      2.   General Guidelines for the Use of Form Numbers.

Some materials are classed for form or publication type (e.g., *Atlases*, *Dictionaries*, *Outlines*) or for the specific aspect of the subject discussed (e.g., education, history, legislation), rather than for the particular subject used. In these instructions, the term "form" is used to mean both publication type and specific aspect of material.

Within each main schedule the numbers **1-39** are used for form. Some main schedules are divided into sections with form numbers in each section. Within the **QV** schedule for *Pharmacy*, for instance, form numbers **QV 701-735** are used instead of the numbers **QV 1-39** that are used for the rest of the *Pharmacology* schedule; form numbers **WO 1-39** are used for *Surgery*, **WO 200-233** for *Anesthesia*. Form numbers are the same in most, but not all schedules.

Always consult the appropriate section of the main schedule and read the annotations before assigning a form number.

When a form number is appropriate, use the form number from the main schedule that covers the primary subject. For example, a work on *Liver Neoplasms* is classed in **WI 735**. An atlas of *Liver Neoplasms* is classed in **WI 17**, along with all other atlases falling within the Gastrointestinal System schedule. A work on *Psychoanalysis* is classed in **WM 460**. *Psychoanalysis* $x *history* is classed in **WM 11**, along with all the other histories falling within the psychiatry schedule.

In general, a form number applies to any subject that falls within a particular classification schedule. Assign the appropriate form number unless the work is on a specific topic, and the form number is annotated "General" or has an instruction such as "Classify works for special subjects with the subject."

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Form numbers annotated "General" are used only for general works. An item on a specific topic within the schedule is assigned a topical class number. Form numbers **5, 7**, and **9** in the various schedules are annotated "General" and are used only for collected works covering the whole schedule. A collected work on a specific topic is classed with the topic.

EXAMPLE:

>A <u>collected work</u> by several authors, covering many aspects of obstetrics is classed in **WQ 5** for collected works, but a collected work on *Fetal Diseases* is properly classed in **WQ 211**.

The following is a representative, not exhaustive, list of form numbers from the NLM Classification and the corresponding publication type:

Classification Numbers	Publication Type or specific aspects
11	*History*
13	*Abbreviations* *Dictionary* *Encyclopedias*
15	*Classification* *Phrases* *Terminology*
16	*Statistics* *Tables*
17	*Atlases* *Pictorial Works*
18	*Education*
18.2	*Examination Questions* *Problems and Exercises* *Outlines* *Programmed Instruction*
22-22.1	*Directory*

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> 25   *Laboratory Manuals*
>
> 32-33.1   *Legislation*
>
> 39/49   *Handbooks*

In addition to the form numbers used throughout the classification schedule, there are several separate form numbers for *Popular Works* in specific sections of the schedule (e.g., **WG 113** for *Heart Diseases*, **WQ 150** for *Pregnancy*, and **QZ 201** for *Neoplasms*).

When both a main heading and subheading have their own form numbers, generally classify for the subheading.

EXAMPLE:

> 060 10 $a WY 11
> 650 12 $a *Education, Nursing* $x history

For special exceptions on classification of historical works see <u>6.Historical Works</u>.

When both a topical subheading and a publication type are classed by form, classify for the publication type.

EXAMPLE:

> 060 10 $a WO 18.2
> 650 12 $a *Surgery* $x history
> 655 2 $a *Outlines*

When more than one publication type is used, list first and classify for the one that is most important.

> 3. Special Instructions for classification of *Legislation* and *Statistics*

> a. *Legislation*

Classify in the form number for laws (generally 32) in the appropriate schedule for the primary subject when 50% or more of the content consists of the text of laws, statutes, etc.

When the content of an item consists of discussion of law, etc., classify in the form number for discussion of law (generally 33) in the appropriate schedule for the primary subject.

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See also the section on "Special instructions for use of Certain Publication Types", specifically use of the publication type Legislation.

b. *Statistics*

Classify in the form number for *Statistics* and *Tables* (generally 16 in whichever NLM schedule is applicable to the primary subject) when 50% or more of the content of the item consists of statistical data or is presented in tabular form (see Special instructions for use of Certain Publication Types, specifically use of the publication type "*Statistics"* and the use of the publication type "*Tables*").

4. Serial Publications

Serials are classified in the form number **W1**.

Exceptions:

- Government administrative and statistical reports are classed in **W2**. Integrated administrative or statistical reports on several hospitals under government administration are also classed in **W2**.

- Hospital administrative and statistical reports, including reports of a single government hospital, are classified in **WX 2**.

- Certain publication types, such as directories, handbooks, etc., issued serially, are classed in those form numbers used also for monographs. Numbers which may be used both for serials and monographs are identified in the classification schedules with the annotation "*Used for both monographs and serials*". See section III.E.2. General Guidelines on the Use of Form Numbers.

- Serial publications consisting of bibliographies, indexes, or abstracts are classed for subject, as are monographs, according to instructions given for monographs. See III.E.1. Bibliographies, Abstracts, and Indexes.

- The **W3** call number, as originally assigned for numbered congresses, is used for analytic records for issues of serially issued congress proceedings when the serial was originally cataloged before that date. If the serial title changes, the new serial title and its analytics are classified according to current policy. For more information on historical practices, see III.G. NLM Classification Assignment – Historical Practices and Changes.

Table G is applied to serials classified in numbers annotated "Table G" as are monographs, according to the principles given in section III.C.1.e. Applying Geographic Subdivision.

   5. Serial Analytics

Serial analytics are classified and shelved with the serial publication.

An alternate subject classification is provided for serial analytics classified in **W1** and **W3**.

Alternate call numbers are not provided for serials classified in **W2** or for those classified in a form, bibliography, or topical number that is also used for monographs.

   6. Works on Historical Aspects of Subjects

In general, the form number 11 is used for works dealing with the historical aspects of all subjects falling within a section of the class schedule (e.g., **WM 11** is used for *Psychiatry* $x *history*; *Mental Health Services* $x *history*; *Psychotherapy* $x *history*, etc.).

Exceptions:

- The history of a drug is classified with the drug. (See annotation under **QV 11** of the <u>NLM class schedule</u>.)

- **W 11** and **WB 11** are not used. Use instead the appropriate number in the **WZ** schedule. In rare exceptions, when there is no appropriate WZ number, the history of a topic is classed in the same number as that used for works on current practice in the W schedule.

- **WB 900** is used for the history of special systems or *Complementary Therapies*; **WB 905.6** specifically for the history of *Chiropractic*. In the **WB** schedule, see the annotation at **WB 11**.

- History of a single infectious disease is classed with the infectious disease and not in **WC 11**. In the **WC** schedule, see annotation at **WC 11**.

- The history of a society is classified in form number 1 in any NLM schedule where applicable. See annotation in the class schedule index under *Societies*.

- For history of schools, laboratories, hospitals, institutes, etc., class in the appropriate form number for the type of entity. For example, **W 19** is used for the history of a medical school, **QY 24** for the history of a laboratory, and **WM 28** for the history of a psychiatric hospital.

- Other exceptions occur in NLM schedules that are subdivided into sections. For example, within the **QS** schedule there are several numbers for history: **QS 11** for *Anatomy* $x history; **QS 511** for *Histology* $x history; **QS 611** for *Embryology* $x history.

- Other special exceptions are noted in the annotations for specific form numbers. For example, under **WX 11**, an annotation is provided to use **WX 215** for the history of emergency or ambulance service.

7. WZ Schedule

The **WZ** schedule is used for works on the *History of Medicine*, for early printed works, and for several special types of publications. It is also used for <u>translations</u> and <u>reprints</u> of early works. Works are classed by period of coverage, locality, original publication date, etc., according to the annotations in the class schedule.

Works on the history of a particular subject are classified with the subject, as discussed in the section on historical works. For example, history of surgery is classed in **WO 11** (see section <u>III.E.6</u>.).

Biographies are classed **WZ 100-150** for persons in the medical field, preclinical sciences, and related fields. Biographies of persons in fields unrelated to medicine are classified in the appropriate LC schedule.

Early printed books (pre-1801) are classed **WZ 220-260**. **WZ 270** is used for Americana. See the class schedule for dates of coverage. At NLM, only catalogers in the <u>History of Medicine Division</u> use the numbers for early printed books, in the range **WZ 220-270**.

Modern editions, criticisms, and translations of early (pre-1801) works are classified in **WZ 290-294**.

The **WZ** schedule is also used for other special types of materials: **WZ 30** for chronologies; **WZ 305-350** for anecdotes, folklore, cartoons, medical writing, biographical clinics on famous persons, etc. Examine the schedule to become familiar with its scope.

8. 19th Century Schedule

There is a special schedule for 19th century publications, used for materials and reprints of materials originally published 1801-1914. The schedule is a simplified subject classification consisting of letters and the classification notations **W1-6, W 600, WX 2**, and the form numbers that appear throughout the schedule.

When it is necessary to use an LC class number for work published in the 19th century, follow a pattern similar to that used in the NLM 19th Century Schedule. That is, assign or use only the letters of the LC schedule that represent the subject of the schedule, e.g., BF for Psychology, SF for Veterinary Medicine, etc.

For instructions on the classification of <u>reprints</u> of early works, see section <u>III.E.14</u>.

For instructions on the classification of <u>translations</u> of early works, see section <u>III.E.13</u>.

      9. Nursing Materials

Classify materials on clinical medicine, written as background material for nurses, with the primary subject. Use the publication type **Nurses' Instruction**. Use the WY schedule for works that include nursing procedures, the nurses' role, and the nursing profession. For historical practice in classifying nursing materials, see <u>III.G. NLM Classification Assignment – Historical Practices and Changes</u>.

EXAMPLES:

      Catalog a work on hypertension written as background material for a nursing audience, that does not include information on the nurses' role as follows:

      060 10 $a **WG 340**
      650 12 $a *Hypertension*
      655 2 $a *Nurses' Instruction*

      Catalog a work defining the nurses' role in diagnosis and treatment of hypertension as follows:

      060 10 $a **WY 152.5**
      650 12 $a *Hypertension* $x nursing

      10. Documents on Microform

Assign subject classification for titles on microform which do not have a Superintendent of Documents (SUDOC) call number. Include a <u>Table G</u> geographic Cutter if appropriate (see section <u>III.C.1.e</u>.). For items containing a SUDOC number, use that number also as the NLM call number.

For serial analytics on microform, provide a complete W1 call number as for print serial analytics.

      11. Electronic Resources

Assign a subject classification for electronic resources as for print documents. Include a <u>Table G</u> geographic Cutter if appropriate (see section <u>III.C.1.e</u>.).

      12. Editions

In general, assign the same classification to new editions of a work as that on the immediately preceding

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edition. The same Cutter number is assigned if the title and the main entry have not changed (see shelflisting instructions for editions).

If the original title was incorrectly cataloged, or if the contents have been revised to the extent that the original class number is no longer correct, or if a new more precise class number has become available, assign the class number that represents the contents more accurately.

Do not revise the classification of earlier editions to match that of a later edition if the item was classified correctly at the time of cataloging, using available classification numbers and rules in effect at that time. Use judgment in determining whether an item was incorrectly classified according to the rules and classification available at the time of cataloging. Correct egregious errors.

13. Translations

In general, classify a translation with the original, unless a more appropriate number has been added to the classification schedule. Do not reclassify the original publication if it was correctly classified according to the schedule in use at the time. See also shelflisting instructions for translations in the "Shelflisting Procedures for Monographs and Classed Serials", (see http://www.nlm.nih.gov/tsd/cataloging/shelf.html).

Classify translations of pre 19th century (pre 1801) works in **WZ 290**.

Classify translations of 19th century (1801-1913) works, as well as translations of works published after 1914, in the main schedule.

14. Reprints

In general, use the complete call number from the original.

Classify reprints of pre 1801 works in **WZ 290**.

Classify reprints of 19th century (1801-1913) works in the 19th Century Schedule.

Classify reprints of 20th- 21st century (1914- present) works with the original, unless a more appropriate number has since been added to the classification schedule. Do not reclassify the original publication if it was correctly classified according to the schedule used at the time.

Consider a modern compilation of reprints of pre 20th century articles or works to be a modern work. Classify collections of reprinted papers in the appropriate number for the subject.

Reprints of several works that include publications from the 20th century or later are classed with

current works.

     15. Supplements

For works that are supplements to other titles (e.g., review manuals, study guides, updates, etc.) and for accompanying books that are dependent on another book to be of any value, assign the same classification and Cutter number as for the main work.   (See also shelflisting instructions for supplements.)

These instructions apply even if a publication type that might otherwise determine the classification is assigned to the supplement. In such cases, do not classify in a form number; use the classification number of the main work.

EXAMPLES:

     Parent vol., published in l998

     060 00 $a 1998 F-521
     060 10 $a WB 105 $b E537 1998

     Supplement published in 1999

     060 00 $a 1999 J-524
     060 10 $a WB 105 $b E537 1998 Suppl. 1999

These instructions do not apply to companion volumes. Classify works that are identified as "companion volumes" or "sequels" to another work appropriately for actual content, not necessarily paralleling the classification of the original work.

III.F. Decision Making in Problem Situations

       1. Choosing between the NLM and LC Classification Schedules

In some cases, a term is indexed to numbers in both the NLM and the LC classification schedules, depending on emphasis. If medical aspects predominate, classify the work in the NLM schedule. If social, religious, or other aspects predominate, classify in the LC schedule. In case of doubt, prefer the NLM schedule.

EXAMPLE:

       A general work on social problems related to abortion is classified in the LC schedule general works number for abortion, **HQ 767**.

       A work on medical issues and procedures related to abortion is classified in the NLM schedule number for abortion, **WQ 440**.

In some cases, even if the medical aspect does not predominate in the content of the work, the work is classified for the medical portion of its content.

EXAMPLE:

       A general botany text that includes information on medicinal plants or medicinal uses of plants is classified for the medical portion of the content.

For more guidance on deciding between the NLM and LC classification numbers, see the section on the Library of Congress schedules in *NLM Classification Practices* at http://www.nlm.nih.gov/class/nlmclassprac.html#Library.

       2. Classifying materials that discuss both humans and animals

If the emphasis is human medicine, classify with the medical aspect in the NLM schedule. For example, a work discussing cancer research using laboratory animals in order to learn what causes cancer in humans, is classified in QZ with works on the etiology of cancer in humans. In general, prefer classification with human medicine.

       3. Classifying Materials for Laboratory Animals vs. Veterinary Medicine

When an animal is discussed in connection with research, classify in **QY** under the specific number for the animal, if available, or the general number for **Animals, Laboratory**, if no specific number is

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available. Care and breeding of laboratory animals also goes in **QY**.

When animal diseases, anatomy, and physiology, or the care and breeding of domestic animals are discussed, choose an appropriate number from the LC SF schedule.

      III.G.   NLM Classification Assignment – Historical Practices and Changes

        1. W3

Prior to 1988, all numbered congresses and serially issued congress proceedings were classified in the form number W3. New serially issued congress proceedings are classified, as are other serials, in form number W1. The proceedings of numbered congresses, not cataloged as serials, are classified separately by subject.   See: III.E.4 Serial Publications for more information on current practice.

        2. WY

Prior to 1984, NLM classified background materials on clinical medicine written for nurses in the **WY** schedule, together with materials dealing with nursing procedures in special fields of Medicine. For current practice on classifying material written for nurses see: III.E.9. Nursing Materials.