

# UDC Medical Sciences Project: Progress and Problems

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## Introduction

Phase 1 of the new class 61 Medical Sciences was completed early in 2009 and the work on Phase 2 is now well under way.

In phase 1, a framework for the new class was established using the organization of facets provided in Class H of the Bliss Bibliographic Classification. Bliss terminology was used in the captions together with UDC notation and formatting as needed. It was designed to be used with other classes in UDC. Concepts and terms, the common auxiliaries, and classes related to medicine were used insofar as they were appropriate. There was heavy use of common auxiliary tables of general characteristics (Table 1k) -02 Properties, -04 Relations and Processes and -05 Persons as they became available. As needed, other tools were consulted including Medical Subject Headings (MeSH) and the World Health Organization's International Classification of Diseases (ICD). As the work on medicine proceeded, revision on UDC in general continued and the new auxiliary tables were created. There was no time for ongoing revision of the new Medical Sciences to keep up with the changes in UDC generally. There were many changes. So at the end of Phase I the result was a framework for medicine which itself needed revision to be compatible with UDC.

In Phase 2 the principal goal is to update the proposed Medical Sciences class to bring it into line with UDC as it exists today and to add new diseases and other terms which are covered in neither Bliss (1981) nor the present UDC 61 (which has not been revised for many years). In particular it is necessary to make full use of the newest auxiliary tables. In this process:

1. Every caption is being searched and edited where necessary;
2. Efforts are being made to ensure that all topics in the current class 61 are covered as well as new ones added;
3. Full use is being made of tables -02, -04, and -05 as appropriate;
4. Efforts are being made to include new diseases, new techniques, etc.;
5. Adjustments are being made to improve the allotment of class numbers and to minimize the length of notation insofar as this is possible.

In Phase 2, some changes have been made accommodating the UDC revisions and freeing up some space to ease the over-crowding and long class numbers at the end. The order of classes has been altered slightly from Bliss. A new subclass 61 has been created to include general materials about the professions and two auxiliary tables have been created – one for medical equipment; the other for non-medical operations applied to medicine. In this process, one class has been freed up. 61 has been used as the first subclass and all the subclasses are being renumbered and moved up. This will help to ease the crowding at the end and (hopefully) reduce the length of some class numbers. The reworking of the first 5 subclasses has been completed. These together with 614 Diseases and Pathology lay the basis for the remainder of the Medical Sciences class.

61	Health sciences. Medical sciences
611	Anatomy and Physiology
612.1/.4	Health, Hygiene and Preventive Medicine
612.5/.9	Curative medicine. Medical care
613	Clinical medicine
614	Diseases and Pathology

Most important will be 614 Diseases and Pathology which contains the facets which are used to develop the topics under the body systems in 615/619. There are two places where the new Class 61 Medical Sciences will differ slightly from UDC in general.

1. Because of the faceted nature of the new 61, there will be many examples of built numbers
2. There will be many "including" statements throughout the class. Bliss has a much greater depth of analysis than UDC. Thus an effort is being made to preserve the rich terminology while restricting division to a level appropriate to the UDC Standard Edition.

### Problems identified in Phase 1

As well as the updating of the content of the new 61 to reflect the ongoing revisions of UDC in general, topics not presently covered in either of the outdated systems (Bliss 1981 and the present UDC class 61) are being added. Included are new diseases and new treatments such as "visualization", and "genetic engineering." In addition, there are a number of specific problems identified during phase 1 that must be addressed.

First of all, there are a number of UDC classes needed for related concepts that are severely outdated and need attention. It is impossible to express the necessary concepts without revision of these (e.g. "cytology"). There is no place in UDC for many of the concepts enumerated in Bliss. Much of "cytology" belongs in 576, not in medicine at all. This subclass needs urgent revision and updating and probably some of the concepts currently in the new 611 should be transferred there. We have not touched 576 but have noted at 611 the need for attention to this issue.

Similarly, 578/579 "virology" and "microbiology" impact greatly on medicine. There is no place for recent concepts (e.g. MRSA). Also, the whole class looks suspiciously out of date. At this time "virology" as it stands has been incorporated into the "viral diseases" in medicine but they shouldn't stay that way.

In addition, the long standing need for "physics" and "chemistry" to be revised remains and impacts on the medicine class.

These revisions are not part of our mandate. We can only use what is there and, in some cases, what is not there.

Cross references is another topic that needs attention. A very thorough check throughout the classification, especially of examples of combination, is essential. Many will need changing as the result of the new system.

Also there are numerous concepts for which there are no numbers. We have identified some of these and have some suggestions of individual terms that need to be added. For example, there is no number for "smog" A possible placing might be 551.575.5. There should also be a number for

“emergency services” as a whole. Separate numbers are enumerated as fire, police or ambulance, in different places. A possible placing for emergency services in general might be 351.5.

There are always new concepts which should be added to the auxiliary tables. Such concepts are part of general revision and are constantly being added. We have some suggested additions for auxiliary tables -02, -04 and -05. The following are all concepts that are needed. Some of them appear in conjunction with complex topics but they are concepts which are suitable for combining with many topics and are candidates for the general auxiliary tables. The suggested placings given below are those that seem most appropriate:

-023.449	Cuboidal
-024.35	Squamous
-044.93	Two dimensional change in general - Add: Dimorphism
-044.938	Polymorphism
-046.212	Scanning
-046.215	Visualisation
-047.45	Measuring

Other double concepts need to have separate numbers, for example “Compatible. Incompatible” – 021.29 should be separated into -021.292 and -021.294 respectively.

Numerous non-medical concepts are inappropriate for use with medicine because of their context. In such cases, new numbers have been created for 61. Nevertheless, there are many improvements since the beginning of phase 1.

Many new table and auxiliary numbers have been created. Somewhat mystifying is the fact that while some non-medical concepts have new class numbers, some non-medical concepts used in phase 1 are missing altogether.

Where have they gone? Other concepts that were together at phase 1 are now separated. A typical example in the new 61 is 613.71/.74 where there is a list of concepts, including such terms as delayed, long-term, short-term, repeated, temporary, premature etc. treatment. All came originally from the systematic table. Now they are scattered. Some - delayed, temporary and repeated – have been given new auxiliary table numbers in -02. Some - short-term, and long-term - remain in the original table. Most unusual is “premature” which is now no longer a single concept but appears as “premature babies” in -053.32.

Finally with medicine the question of the choice of notation has been raised.

The present notation is extremely long in some places, especially with built up numbers and the space in 61 is limited for such a large domain. There are several alternatives that have been suggested over time. Should we stay with 61? Or should we use part of class 4? If so which part? There have been other proposals for the use of Class 4, for example “psychology.” If so, it would helpfully precede medicine but using 4 will upset the arrangement of the Pure Sciences preceding their application. Another suggestion is to provide two sets of notation, 61 and 4 as alternatives. The problem of which bit of 4 to use would remain.

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## **Conclusion**

This paper is a slightly updated version of a presentation made at a Round Table on UDC revision held before the UDC Seminar in The Hague in October 2009. The work of revision is continuous and occurs slowly. Nevertheless, it has come a long way since the beginning of this project. However, the nature of the Medical Sciences is such that there will always be some dependence on other parts of the classification.