International Statistical Classification of Diseases and Related Health Problems (ICD-10)

What is clinical coding?

Is the translation of diseases, health related problems and procedural concepts from text to alphabetic/numeric codes to storage, retrieval and analysis

What is a statistical classification?

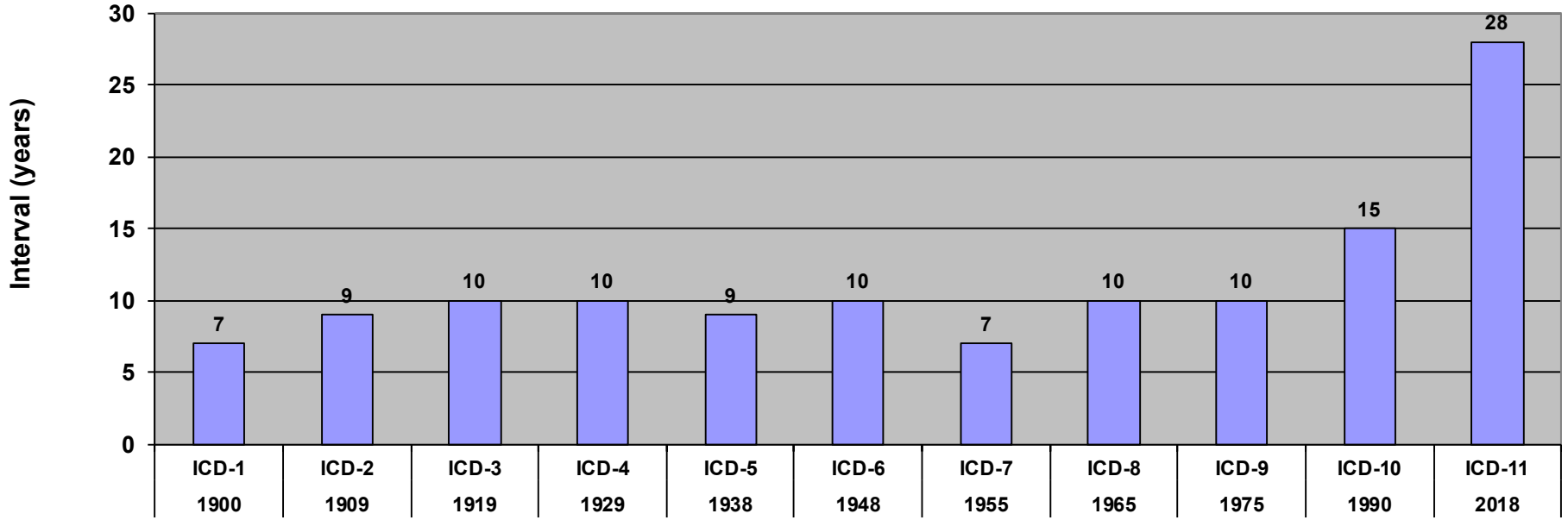
- Is a system of categories or groupings to which diseases, injuries, conditions and procedures are assigned according to established criteria.

- The classification is hierarchical in structure with subdivisions to identify broad groups and specific entities.

Why use a classification?

- To allow easy storage, retrieval and analysis of data
- To allow comparisons of data between hospitals, provinces or countries
- To allow comparisons in the same location across different time periods

ICD Revisions

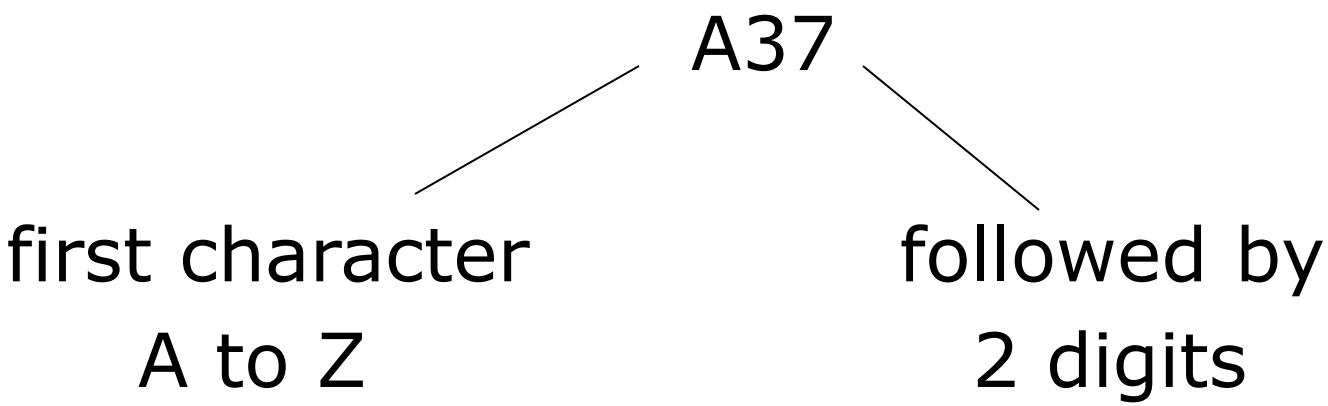


Chapters of the ICD-10

- 22 chapters
- Identified by a Roman numeral i.e. I,II,III,IV,V etc
- Should call chapter number and not by the letters of the codes associated with it. (because some chapters contain more than one letter and some letters are used in more than one chapter)

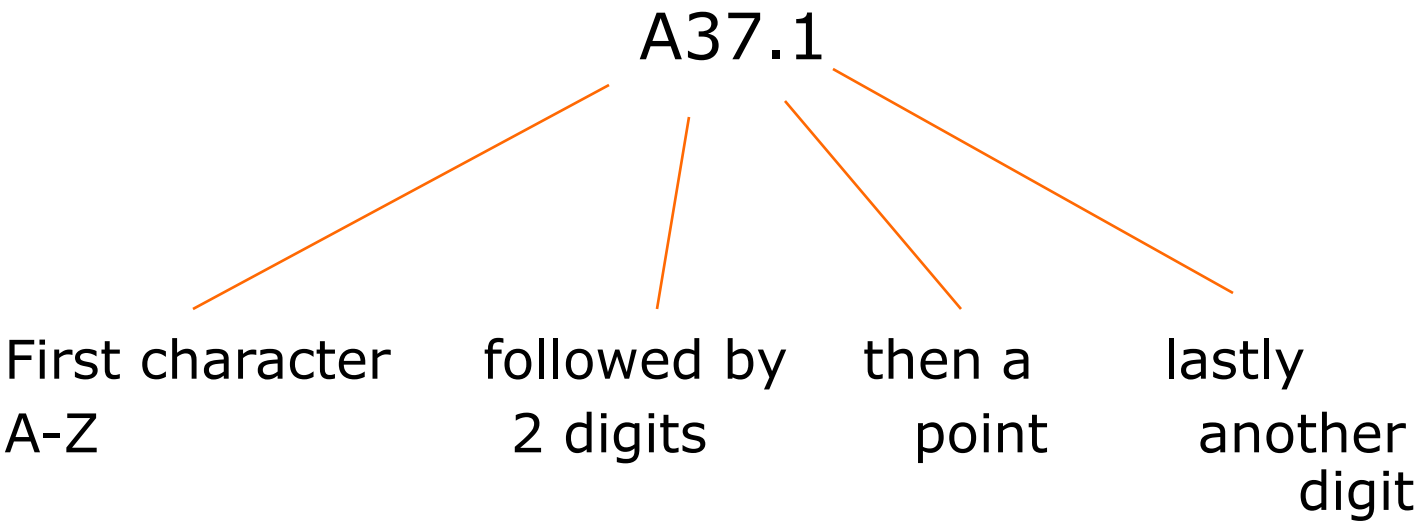
Structure of the ICD-10code

- The first character of the code is an alpha character , followed by two, three or four numeric characters
- The structure of the three character category is



Four-character subcategory

- Most three character categories are further subdivided into sub-categories to enable coding of a disease or condition more specifically



Secrets of ICD-10

1. It is not a coding system but it is a classification system
   - Assign 1 code to 1 diagnosis term !!!!

   - For example :
   - What is (are) ICD-10 code (s) for diagnosis term “Intracerebral Hemorrhage” ?

Intracerebral hemorrhage codes

- S06.3 — **for a patient who rode a motorcycle collision with a bus with frontal lobe hemorrhage**
- I61.0 — **for a 45 years old patient with underlying hypertension then found coma in his room, CT-scan revealed basal ganglion hemorrhage**
- O99.4 — **for a 25 years old pregnant woman who have got hemorrhage in her brain during giving birth to her baby(Pregnancy induced hypertersion)**
- P10.1 — **for a newborn baby with hemorrhage in brain found 1 days after difficulty delivery from breech position**

Secrets of ICD-10

2. Quality of code (a coder) selected depend on quality of diagnosis term
   - Bad diagnosis term cause bad quality code

Head injury S09.9

- Scalp contusion S00.0
- Scalp Laceration S01.0
- Fracture skull S02.00
- Subdural hematoma S06.5
- Cerebral concussion S06.0
- Cerebral contusion S06.3

Secrets of ICD-10

- 3. You can not use ICD-10 instead of diagnostic term
  - Why?

One code may represent many terms

- A09 code
  - Diarrhea
  - Acute gastroenteritis
  - Enteritis
  - Colitis
  - etc..

Volume 1
Tabular List

Chapter of ICD-10

Chapter	Alphabet	Description
I	A,B	Infection
II	C,D	Neoplasm
III	D	Blood & Blood-forming organs
IV	E	Endocrine, Nutrition, Metabolic
V	F	Mental
VI	G	Nervous system
VII	H	Eye & adnexa
VIII	H	Ear & mastoid process
IX	I	Circulatory system
X	J	Respiratory system
XI	K	Digestive system

Chapter of ICD-10

Chapter	Alphabet	Description
XII	L	Skin
XIII	M	Musculoskeletal
XIV	N	Genitourinary
XV	O	Pregnancy, Childbirth & Puerperium
XVI	P	Perinatal period
XVII	Q	Congenital
XVIII	R	Symptoms, signs & abnormal clinical & laboratory
XIX	S,T	Injury, poisoning & external causes
XX	V,W, X,Y	External causes of morbidity & mortality
XXI	Z	Factor influencing health status
XXII	U	Special purposes

CHAPTER XI

Diseases of the digestive system (K00–K93) (Blocks)

- K00–K14 Diseases of oral cavity, salivary glands and jaws
- K20–K31 Diseases of oesophagus, stomach and duodenum
- K35–K38 Diseases of appendix
- K40–K46 Hernia
- K50–K52 Noninfective enteritis and colitis
- K55–K63 Other diseases of intestines
- K65–K67 Diseases of peritoneum
- K70–K77 Diseases of liver
- K80–K87 Disorders of gallbladder, biliary tract and pancreas
- K90–K93 Other diseases of the digestive system

List of three character categories

Diseases of liver (K70–K77)

- K70 Alcoholic liver disease
- K71 Toxic liver disease
- K72 Hepatic failure, not elsewhere classified
- K73 Chronic hepatitis, not elsewhere classified
- K74 Fibrosis and cirrhosis of liver
- K75 Other inflammatory liver diseases
- K76 Other diseases of liver
- K77* Liver disorders in diseases classified elsewhere

Tabular list of inclusions and four-character subcategories

K70 **Alcoholic liver disease**

- K70.0 Alcoholic fatty liver
- K70.1 Alcoholic hepatitis
- K70.2 Alcoholic fibrosis and sclerosis of liver
- K70.3 Alcoholic cirrhosis of liver

  Alcoholic cirrhosis NOS
- K70.4 Alcoholic hepatic failure

  Alcoholic hepatic failure:

  NOS
  acute
  chronic
  subacute
  with or without hepatic coma
- K70.9 Alcoholic liver disease, unspecified

Volume II Instruction Manual

Contents

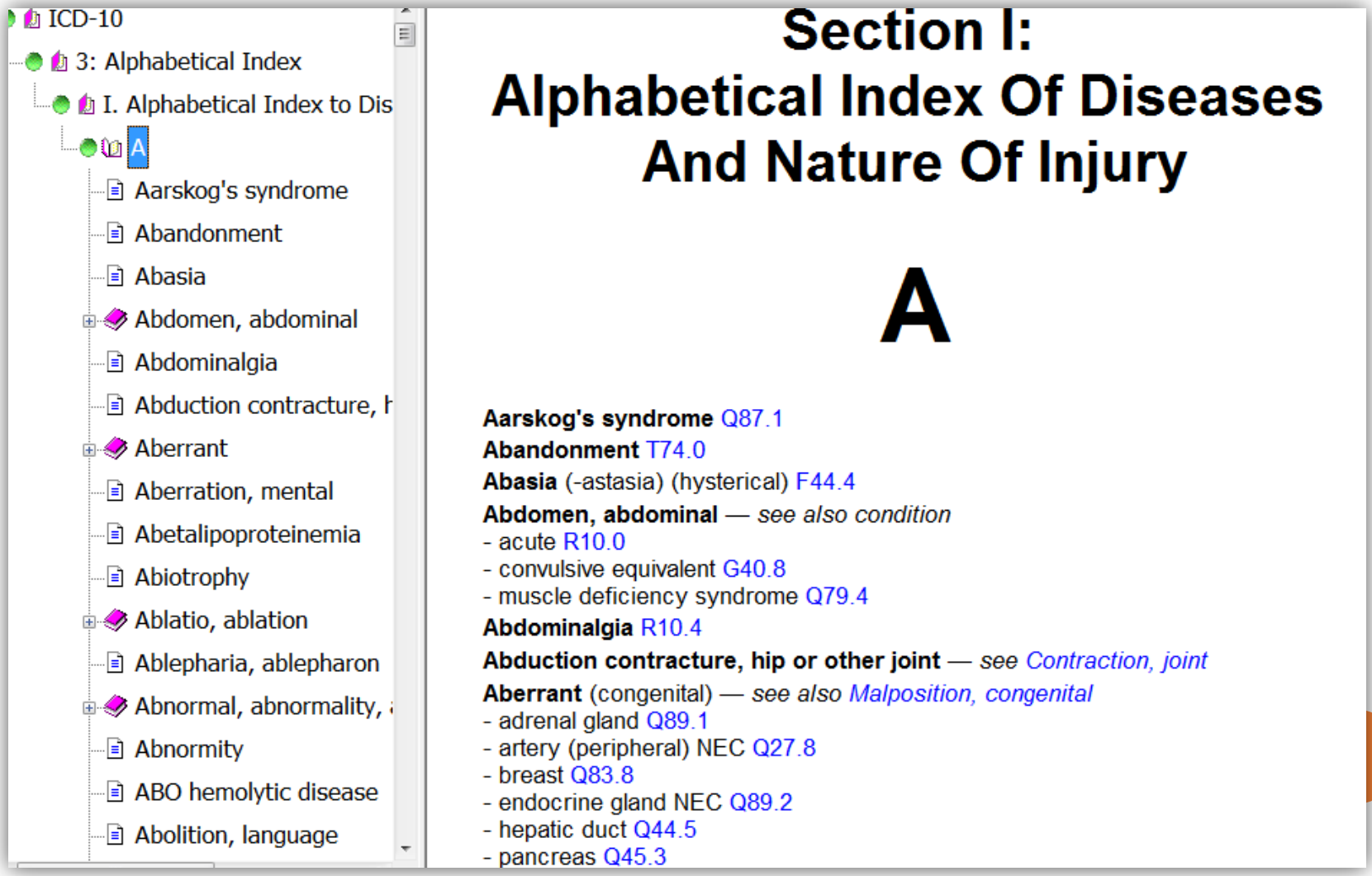
Volume II.

- Introduction
- Description of ICD
- How to use the ICD
- Rules & guidelines for mortality & morbidity coding
- Statistical presentation
- History of the development of the ICD
- Appendices

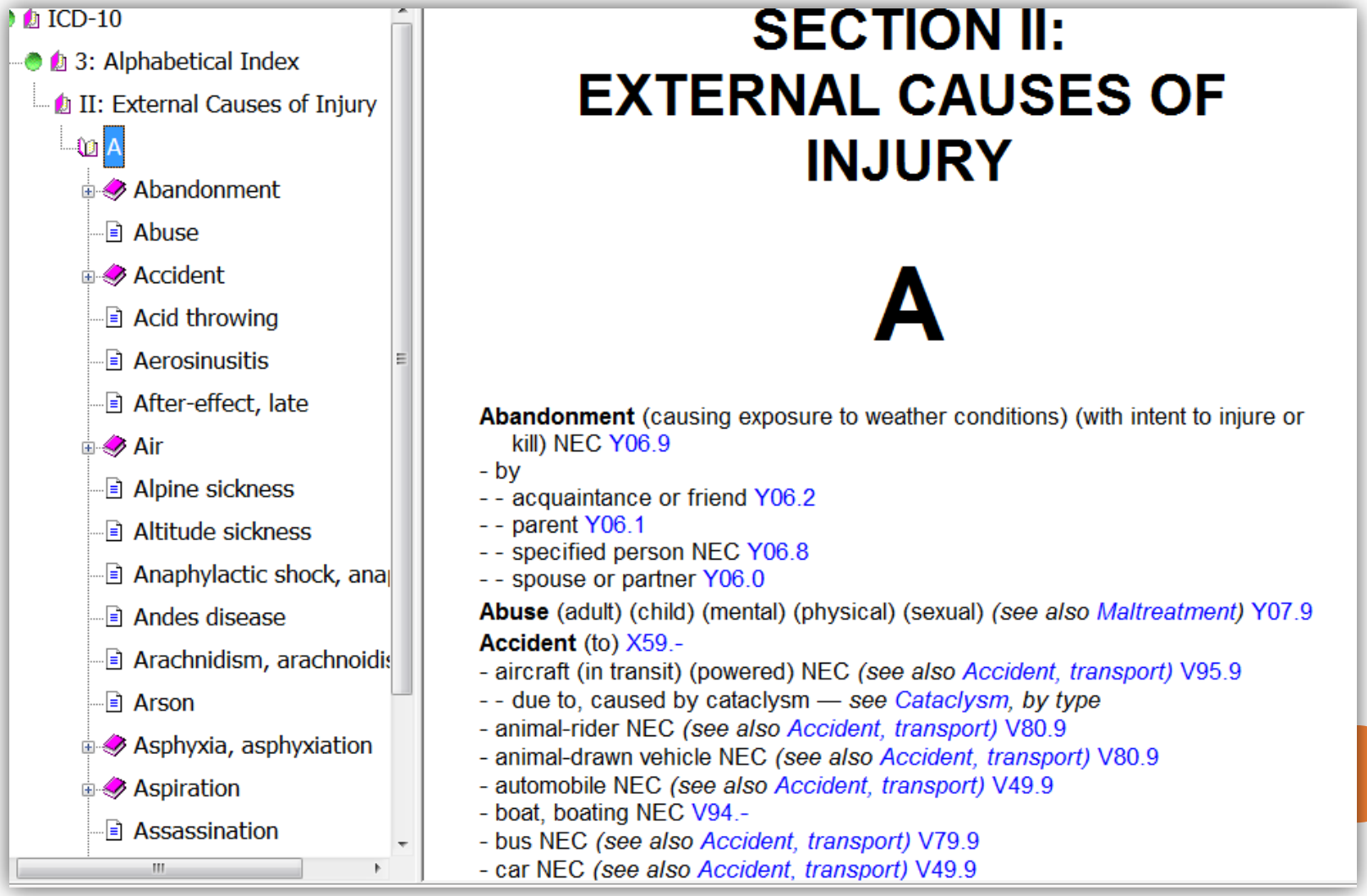
Contents in Volume 3

Introduction	purpose of the index, its general arrangement and conventions used in the index
Section I	terms relating to diseases, nature of injury, reasons for contact with health services and factors influencing a person's health
Section II	external causes of injury, morbidity and mortality
Section III	table of drugs and chemicals

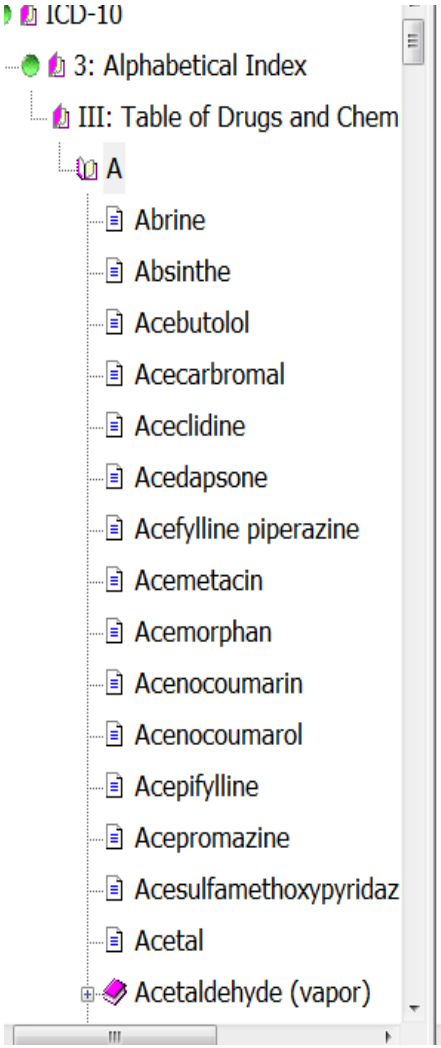
Section I


ICD-10
3: Alphabetical Index
I. Alphabetical Index to Dis
A
Aarskog's syndrome
Abandonment
Abasia
Abdomen, abdominal
Abdominalgia
Abduction contracture, h
Aberrant
Aberration, mental
Abetalipoproteinemia
Abiotrophy
Ablatio, ablation
Ablepharia, ablepharon
Abnormal, abnormality,
Abnormity
ABO hemolytic disease
Abolition, language
Section I:
Alphabetical Index Of Diseases And Nature Of Injury
A
Aarskog's syndrome Q87.1
Abandonment T74.0
Abasia (-astasia) (hysterical) F44.4
Abdomen, abdominal — see also condition
- acute R10.0
- convulsive equivalent G40.8
- muscle deficiency syndrome Q79.4
Abdominalgia R10.4
Abduction contracture, hip or other joint — see Contraction, joint
Aberrant (congenital) — see also Malposition, congenital
- adrenal gland Q89.1
- artery (peripheral) NEC Q27.8
- breast Q83.8
- endocrine gland NEC Q89.2
- hepatic duct Q44.5
- pancreas Q45.3

Section II


ICD-10
3: Alphabetical Index
II: External Causes of Injury
A
Abandonment
Abuse
Accident
Acid throwing
Aerosinusitis
After-effect, late
Air
Alpine sickness
Altitude sickness
Anaphylactic shock, ana
Andes disease
Arachnidism, arachnoidis
Arson
Asphyxia, asphyxiation
Aspiration
Assassination
SECTION II:
EXTERNAL CAUSES OF INJURY
A
Abandonment (causing exposure to weather conditions) (with intent to injure or kill) NEC Y06.9
- by
- - acquaintance or friend Y06.2
- - parent Y06.1
- - specified person NEC Y06.8
- - spouse or partner Y06.0
Abuse (adult) (child) (mental) (physical) (sexual) (see also Maltreatment) Y07.9
Accident (to) X59.-
- aircraft (in transit) (powered) NEC (see also Accident, transport) V95.9
- - due to, caused by cataclysm — see Cataclysm, by type
- animal-rider NEC (see also Accident, transport) V80.9
- animal-drawn vehicle NEC (see also Accident, transport) V80.9
- automobile NEC (see also Accident, transport) V49.9
- boat, boating NEC V94.-
- bus NEC (see also Accident, transport) V79.9
- car NEC (see also Accident, transport) V49.9

Section III



Section III:
Table of drugs and chemicals

Substance	Chapter XIX	Poisoning Accidental	Poisoning Intentional Self-harm	Poisoning Undetermined intent
A				
Abrine	T62.2	X49.–	X69.–	Y19.–
Absinthe	T51.0	X45.–	X65.–	Y15.–
Acebutolol	T44.7	X43.–	X63.–	Y13.–
Acecarbromal	T42.6	X41.–	X61.–	Y11.–
Aceclidine	T44.1	X43.–	X63.–	Y13.–
Acedapsone	T37.0	X44.–	X64.–	Y14.–
Acefylline piperazine	T48.6	X44.–	X64.–	Y14.–
Acemetacin	T39.3	X40.–	X60.–	Y10.–
Acemorphan	T40.2	X42.–	X62.–	Y12.–
Acenocoumarin	T45.5	X44.–	X64.–	Y14.–
Acenocoumarol	T45.5	X44.–	X64.–	Y14.–
Acepifylline	T48.6	X44.–	X64.–	Y14.–

Golden Coding Rules

Golden Coding Rule Number 1

Volumes 1 and 3 must be used together to correctly find codes for each case (e.g. cause of death or diagnosis).

Golden Coding Rule Number 2

The special disease categories take priority over the body system categories.

Golden Coding Rule Number 3

The dagger code (†) is used as the underlying cause of death. Never use the asterisk code (*) alone if the diagnosis being coded uses the dagger and asterisk convention.

Golden Coding Rule Number 4

Be cautious of the spelling of the diseases you are coding since the Tabular List uses British spelling and the Alphabetical Index uses American spelling. There are cross-references in the Index to guide you to the American spelling.

Basic coding guidelines

- 1. Identify the type of statement to be coded and refer to the appropriate section of the Alphabetical Index. (If the statement is a disease or injury or other condition classifiable to Chapters I-XIX or XXI, consult Section I of the Index. If the statement is the external cause of an injury or other event classifiable to Chapter XX, consult Section II.)

- 2. Locate the lead term. For diseases and injuries this is usually a noun for the pathological condition. However, some conditions expressed as adjectives or eponyms are included in the Index as lead terms.

- 3. Read and be guided by any note that appears under the lead term.

- 4. Read any terms enclosed in parentheses after the lead term (these modifiers do not affect the code number), as well as any terms indented under the lead term (these modifiers may affect the code number), until all the words in the diagnostic expression have been accounted for.

- 5. Follow carefully any cross-references (“see” and “see also”) found in the Index.

- 6. Refer to the tabular list to verify the suitability of the code number selected. Note that a three-character code in the Index with a dash in the fourth position means that there is a fourth character to be found in Volume 1. Further subdivisions to be used in a supplementary character position are not indexed and, if used, must be located in Volume 1.

- 7. Be guided by any inclusion or exclusion terms under the selected code or under the chapter, block or category heading.

- 8. Assign the code.

- E.g **bilateral inguinal hernia with gangrene and obstruction**

- Hernia
- - inguinal
- - -bilateral
- - - -with
- - - - - gangrene (and obstruction) K40.1

- **Hypochromic microcystic anemia**
- Anaemia
- - hypochromic
- --microcystic – D50.8

- **Diabetic cataract**
- Cataract
- -diabetic – E14.3† **H28.0 ***

- **Pneumococcal meningitis**
- Meningitis
- -pneumococcal – G00.1

- **Acute purulent otitis media**
- Otitis
- - media
- --acute or subacute
- --- purulent – H66.0

- **Strangulated internal hemorrhoids**
- -hemorrhoids
- --internal
- ---bleeding, prolapsed, strangulated or ulcerated – I84.1

- **Bleeding gastric ulcer**
- Ulcer
- -gastric – see ulcer, stomach
- Ulcer
- -stomach
- --with
- ---hemorrhage K25.4

Role of Medical Doctors in Clinical Coding

If it isn't documented,
it didn't happen.

Help clinical coding staff do their job – make the information they need easy to find, accurate and complete.

Remember that clinical coders – like you – have a job to do, and you can help make that job a lot easier.

The coded data are vitally important, and are used for:

- Monitoring the provision of health services
- Research and the monitoring of health trends and variations
- Financial planning and Payment by Results
- Local and national clinical audit and case-mix analysis
- Clinical governance.

How to improve clinical coding?

Introduction

For clinical coding to be as valuable as possible it is critical the coder has:

- access to a comprehensive and accurate medical record,
- the skills to extract all pertinent data for coding,
- access to clinicians to ask questions and seek clarification

Responsibilities

Coders

- reviewing the entire record
- verifying the record contains appropriate documentation
- coding specifically and accurately the conditions or diagnoses treated or affecting a patient's care
- referring the record to clinicians for clarification

Clinicians

- recording accurate and complete clinical documentation in the medical record
- recording all diagnoses on the front summary sheet
- identifying the main condition

When to consult with the Medical Officer

If conflicting, incomplete or ambiguous information is found or if documentation is unclear

→ Check with the attending medical officer, the medical officer who filled in the front sheet or the radiologist or pathologist

Coding should be a cooperative and collaborative effort between the clinician and the coder

WHO DEFINITION OF MAIN DIAGNOSIS OR MAIN CONDITION

…the diagnosis established at the end of the episode of care to be the condition primarily responsible for the patient receiving treatment or being investigated…that condition that is determined to have been mainly responsible for the episode of health care...

(ICD-10, volume 2, 4.4)

Problems with determining the main diagnosis

- absence of a clear-cut main diagnosis
- minor condition recorded as main diagnosis
- diagnosis recorded in general or ill-defined terms
- uncertainty of diagnosis
- symptoms or signs listed as the main diagnosis
- no diagnosis recorded

Quality Assurance in Morbidity Data Collection

Increasing use of morbidity data leads to an increasing concern for the reliability of data

Sources of error in MR information systems:

- documentation of the patient's care and condition during the episode in hospital
- coding the information in the medical record
- processing the coded information

What affects coding quality?

- Documentation
- Incomplete medical records
- Availability of records
- Coder/clinician communication
- Data entry
- System edits
- Forms design

What affects coding quality?

- Workload
- Education
- Human resources
- Environment
- The individual
- Reference material

Coder/Clinician Communication is important for:

- Team approach to achieve complete and accurate documentation
- Clinician's responsibility to record accurate diagnoses and procedures and document fully the episode of care
- Coder's responsibility to review and use documentation; use standard definitions, use their skill and knowledge of the current coding system

THANK YOU