

11/10/01

2.

&

&

\* حاج نظام ممتاز العالم  
لتسجيل الأدوية  
الـ ٢٠٠٠

(هو ابن الحنفية)  
الادوية

(14 is  $\rightarrow$  14 maintain group)

دليل الاثنية  
الأردني  
مأخذ على هاد

ATC code

$$(171) \Rightarrow \underline{149}$$

T

Hormonal  
musculoskeletal

$\Rightarrow \hat{z} = \hat{z}_{code} \rightarrow \hat{z}_{r,k} \rightarrow \hat{z}_{b,pic}$





# No thing perfect, there are challenges

- Medicinal products are classified according to the main therapeutic use of the main active ingredient. The ATC system is, however, not strictly a therapeutic classification system.
  - For example, calcium channel blockers are classified in the pharmacological group C08 Calcium channel blockers, which avoids specifying whether the main indication is coronary heart disease or hypertension.
- Many medicines are used and approved for two or more indications, while normally only one ATC code will be assigned.
- Besides, ATC codes are often assigned according to the mechanism of action rather than therapy.
- An ATC group may therefore include medicines with many different indications, and drugs with similar therapeutic use may be classified in different groups.

\* Code → action \*  
 = dosage \*  
 = form \*

كل هاد  
 اتي بعل  
 two codes

ما في نظام  
 بالعالم  
 1,100  
 مبيع في تجيل

# No thing perfect, there are challenges

- A medicinal substance can be given more than one ATC code if it is available in two or more strengths or routes of administration with clearly different therapeutic uses.

هو هرمونية  
 للبروستات  
 وكونه يقيهم  
 للصلح ايضا

**Finasteride** is available in two different strengths.

- A low strength tablet for the treatment of **male pattern baldness** is classified under D11AX - Other dermatologicals.
- A high strength tablet used in the treatment of benign prostatic hypertrophy (BPH) is classified under G04C - Drugs used in BPH.

- **Prednisolone** in single ingredient products is given several ATC codes due to different therapeutic use and different formulations.

- A07EA01 Intestinal antiinflammatory agents (enemas and foams)
- C05AA04 Antihemorrhoidals for topical use (suppositories)
- D07AA03 Dermatological preparations (creams, ointments and lotions)
- H02AB06 Corticosteroids for systemic use (tablets, injections)
- R01AD02 Nasal decongestants (nasal sprays/drops)
- S01BA04 Ophthalmologicals (eye drops)
- S02BA03 Otologicals (ear drops)

10  
 (different  
 codes)  
 ↓  
 code  
 بكونه مبيع

ما

نحي  
 code ⇒ مش  
 مبيع مع  
 (Dosage  
 form)

بلونه حافوز  
 code  
 الفع في  
 المكان الخدم  
 =

1 g  $\rightarrow$  200 TD  
paracetamol  $\left[ \hat{=} \hat{=} \right]$   
600 mg  $\rightarrow$  80 TD  
ibuprofen.

لا  
افضل  
الودائع  
ورق  
افضل  
الا انه  
ثابتة  
000

- لا  
افضل  
الودائع  
ورق  
افضل  
الا انه  
ثابتة  
000

(coverage maintenance dose) ← في دلو عدد دامة، مائة

• What is ATC/DDD ?

the DDD is the assumed average maintenance dose per day for a drug used for its main indication in adults.

for its main indication in adults.  $\Rightarrow$  يخفف الألم ويزيد الرغبة  
0.5g و 1g

∴ هي جرعة الصلابة ⇒ (\*Therapeutic daily maintenance dose) من الدواء بغير التأثير  
في strength تتغير

\* Paracetamol max. dose = 4 g. (dosage form) in 9

\* maintenance dose for pain relief = 1g

# International Statistical Classification of Diseases and Related Health Problems

ICD 10, has been used since 1999 – 2010 – 2018

- <http://apps.who.int/classifications/icd10/browse/2010/en>

هونظام لتصنيف الأرقام  
ولسيت الأديبة

**Wow ICD 11 has just been released in 18 June 2018**

<https://icd.who.int/browse11/l-m/en>

/l-m/en

\* 2010 → 7,8 / 2019

↓ ↓

version 10 version 11

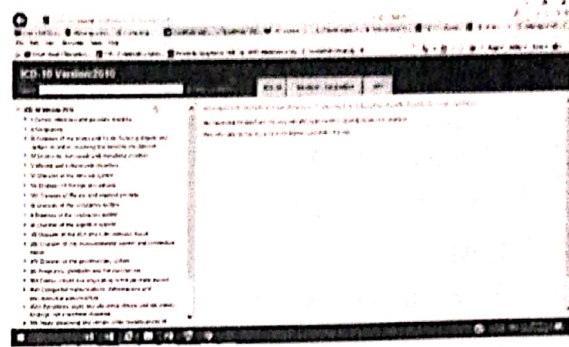
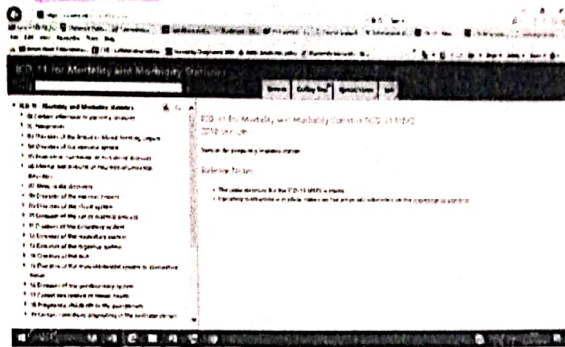
\* اچھی مثال  
عادل دراستان  
ہمیکہ لازم  
نہیں  
Transfer to data  
فہ (10)  
11  
لا وہا، ہندی  
شرکات  
کتنے تھے علی



( \* متوقع انه يخل فرمنا عل )  
 = ( هاد اعلم )  
 ( فافوفه Factor ) 2018

## ICD-11 Mortality and Morbidity Statistics

ICD - 10 2010



هاي  
 codes  
 300  
 عالم  
 علها

- About 300 specialists of 55 countries, organized in 30 main working groups have provided their input to make ICD-11 scientifically up-to-date
- Structural problems that became apparent using ICD-10 have been solved.
- ICD-11 is much easier to use than ICD-10.
- Its ontological infrastructure allows for an improved user guidance compared to ICD-10.

ربلورد

\* ← أرفنا جتوي عل ل  
 اسنه من اسر

لهن بنسقل  
 رفقيا مشه  
 Digits =  
 (nominal)  
 اصي  
 مرتباً منه  
 Statistics  
 Code  
 آبي  
 سته منه  
 \* ←

## ICD - 11 some features

- ICD-11 has five new chapters: Chapter 3 Diseases of the Blood and Blood-forming Organs

Chapter 4 Disorders of the Immune System.

Chapter 6 Conditions related to Sexual Health.

Chapter 8 Sleep-Wake Disorders

Chapter 26 **Extension codes** (These categories should never be used in primary coding. They are provided for use as supplementary or additional codes when it is desired to identify more detail in diseases classified elsewhere)

Chapter 27 Traditional Medicine (Chinese , Japan and Korea)

And have special chapter that help assess Quality of life measurement

Primary codes

\* كات بال 10 extension code version

كارت بال 11 Primary

90% extension codes

in 11 version

21 دقير

Primary codes

Primary codes

Primary codes

Primary codes

Primary codes

Primary codes

Primary codes



## Some differences in ICD 11

- now Arabic numbers -not Roman numerals

- First character** of the code always relates to the chapter number. –1-Z

relationship between  
 is "due to".

- inc  
abol  
Furapb

OR  $\rightarrow$  

and  $\rightarrow$  





## ICD-11 for Mortality and Morbidity Statistics

Browse Coding Tool Special Views Info

- ▶ 03 Diseases of the blood or blood-forming organs
- ▶ 04 Diseases of the immune system
- ▶ 05 Endocrine, nutritional or metabolic diseases
- ▶ 06 Mental, behavioural or neurodevelopmental disorders
- ▶ 07 Sleep-wake disorders
- ▶ 08 Diseases of the nervous system
- ▶ 09 Diseases of the visual system
- ▶ 10 Diseases of the ear or mastoid process
- ▶ 11 Diseases of the circulatory system
- ▶ 12 Diseases of the respiratory system
  - ▶ Upper respiratory tract disorders
  - ▶ Certain lower respiratory tract diseases
  - ▶ Lung infections
  - ▶ Lung diseases due to external agents
  - ▶ Respiratory diseases principally affecting the lung interstitium
  - ▶ Pleural, diaphragm or mediastinal disorders
  - ▶ C840 Certain diseases of the respiratory system
  - ▶ C841 Respiratory failure
  - ▶ Postprocedural disorders of the respiratory system
  - ▶ Neoplasms of the respiratory system
  - ▶ Developmental respiratory diseases

### Postcoordination

Add detail to **Bacterial pneumonia**

Has causing condition (code also)

Search

Laterality (use additional code, if desired)

- XX9J Bilateral
- XX8G Left
- XX9K Right
- XX7D Unilateral, unspecified
- XX6G Unspecified laterality

Infectious agent (use additional code, if desired)

Search

Associated with (use additional code, if desired)

Search

Infectious agent

- ▶ XN5PZ Gram Negative Bacteria
- ▶ XN2QM Gram Positive Bacteria
- ▶ XN5TX Bacteria, neither Gram Negative nor Gram Positive

Release Notes

## ICD-10 Version:2010

Search

[Advanced Search]

ICD-10

Versions - Languages

Info

- ▶ VI Diseases of the nervous system
- ▶ VII Diseases of the eye and adnexa
- ▶ VIII Diseases of the ear and mastoid process
- ▶ IX Diseases of the circulatory system
- ▶ X Diseases of the respiratory system
  - ▶ J00-J06 Acute upper respiratory infections
  - ▶ J09-J18 Influenza and pneumonia
  - ▶ J20-J22 Other acute lower respiratory infections
  - ▶ J30-J39 Other diseases of upper respiratory tract
  - ▶ J40-J47 Chronic lower respiratory diseases
  - ▶ J60-J70 Lung diseases due to external agents
  - ▶ J80-J84 Other respiratory diseases principally affecting the interstitium
  - ▶ J85-J86 Suppurative and necrotic conditions of lower respiratory tract
  - ▶ J90-J94 Other diseases of pleura
  - ▶ J95-J99 Other diseases of the respiratory system
- ▶ XI Diseases of the digestive system
- ▶ XII Diseases of the skin and subcutaneous tissue
- ▶ XIII Diseases of the musculoskeletal system and connective tissue
- ▶ XIV Diseases of the genitourinary system
- ▶ XV Pregnancy, childbirth and the puerperium
- ▶ XVI Certain conditions originating in the perinatal period

### International Statistical Classification of Diseases and Related Health Problems 10th Revision (ICD-10) Version for 2010

#### Chapter X Diseases of the respiratory system (J00-J99)

**Note:** When a respiratory condition is described as occurring in more than one site and is not specifically indexed, it should be classified to the lower anatomic site (e.g., tracheobronchitis to bronchitis in J40).

**Excl.:** certain conditions originating in the perinatal period (P00-P96)  
certain infectious and parasitic diseases (A00-E99)  
complications of pregnancy, childbirth and the puerperium (O00-O99)  
congenital malformations, deformations and chromosomal abnormalities (Q00-Q99)  
endocrine, nutritional and metabolic diseases (E00-E90)  
injury, poisoning and certain other consequences of external causes (S00-T99)  
neoplasms (C00-D49)  
symptoms, signs and abnormal clinical and laboratory findings, not elsewhere classified (R00-R99)

**This chapter contains the following blocks:**

- J00-J06 Acute upper respiratory infections
- J09-J18 Influenza and pneumonia
- J20-J22 Other acute lower respiratory infections
- J30-J39 Other diseases of upper respiratory tract



- ▶ VI Diseases of the nervous system
- ▶ VII Diseases of the eye and adnexa
- ▶ VIII Diseases of the ear and mastoid process
- ▶ IX Diseases of the circulatory system
- ▶ X Diseases of the respiratory system
  - ▶ J00-J06 Acute upper respiratory infections
  - ▶ J09-J18 Influenza and pneumonia
    - ▶ J09 Influenza due to certain identified influenza virus
    - ▶ J10 Influenza due to other identified influenza virus
    - ▶ J11 Influenza, virus not identified
    - ▶ J12 Viral pneumonia, not elsewhere classified
    - ▶ J13 Pneumonia due to Streptococcus pneumoniae
    - ▶ J14 Pneumonia due to Haemophilus influenzae
    - ▶ J15 Bacterial pneumonia, not elsewhere classified
    - ▶ J16 Pneumonia due to other infectious organisms, not elsewhere classified
    - ▶ J17 Pneumonia in diseases classified elsewhere
    - ▶ J18 Pneumonia, organism unspecified
  - ▶ J20-J22 Other acute lower respiratory infections
  - ▶ J23-J29 Other diseases of upper respiratory tract
  - ▶ J40-J47 Chronic lower respiratory diseases
  - ▶ J60-J70 Lung diseases due to external agents
  - ▶ J80-J84 Other respiratory diseases principally affecting

**J13 Pneumonia due to Streptococcus pneumoniae**  
*Incl.:* Bronchopneumonia due to S. pneumoniae  
*Excl.:* congenital pneumonia due to S. pneumoniae (P23.6)  
 pneumonia due to other streptococci (J15.3-J15.4)

**J14 Pneumonia due to Haemophilus influenzae**  
*Incl.:* Bronchopneumonia due to H. influenzae  
*Excl.:* congenital pneumonia due to H. influenzae (P23.6)

**J15 Bacterial pneumonia, not elsewhere classified**  
*Incl.:* bronchopneumonia due to bacteria other than S. pneumoniae and H. influenzae  
*Excl.:* chlamydial pneumonia (J16.0)  
 congenital pneumonia (P23.6)  
 Legionnaires disease (A48.1)

**J15.0 Pneumonia due to Klebsiella pneumoniae**

**J15.1 Pneumonia due to Pseudomonas**

**J15.2 Pneumonia due to staphylococcus**

**J15.3 Pneumonia due to streptococcus, group B**

**J15.4 Pneumonia due to other streptococci**

*Excl.:* pneumonia due to:  
 • streptococcus, group B (J15.3)  
 • Streptococcus pneumoniae (J13)

\*  
 المرض  
 المرض  
 بالسنة  
 الـ

- Poly pharmacy
- Comorbidity index
- 
- 

## Comorbidity and Charlson comorbidity index,

The term "comorbid" has three definitions:

- to indicate a medical condition existing simultaneously but independently with another condition in a patient (this is the older and more "correct" definition)
- to indicate a medical condition in a patient that causes, is caused by, or is otherwise related to another condition in the same patient (this is a newer, nonstandard definition and less well-accepted)
- to indicate two or more medical conditions existing simultaneously regardless of their causal relationship

### Charlson comorbidity index

is a method of categorizing comorbidities of patients based on the International Classification of Diseases (ICD) diagnosis codes found in administrative data, such as hospital data.

- Each comorbidity category has an associated weight (from 1 to 6), based on the adjusted risk of mortality or resource use, and the sum of all the weights results in a single comorbidity score for a patient.

A score of zero indicates that no comorbidities were found. The higher the score, the more likely the predicted outcome will result in mortality or higher resource use.

Charlson

على عينة بـ  
 Comorbidity

طالعة  
 بالصفحة  
 بالصفحة

longitudinal cohort studies.



CCI, Please visit;

<https://www.mdcalc.com/charlson-comorbidity-index-cci>

(Calculation)

← \*  
حساب سنو المرفقة  
بقرنة  
comorbidity.

- CCI provides a simple, readily applicable, and valid method for classifying comorbidities and predicting the mortality.
- It predicts life up to 10 years. Too many online calculator are available

### Age Adjusted CCI

Add:

- 0 if 50–59 years
- +1 if 60–69 years
- +2 if 70–79 years
- +3 if ≥80 years

هنا سنو  
10 سنوات  
بعد  
60

① = واحد عمر 65 سنة

+ وبعده

① = Diabetes without complications

→ ② =

**10-year survival** =  $0.983^{(e^{aCCI \times 0.9})}$ , where aCCI = age adjusted Charlson Comorbidity Index.

\* CCI ← valid و reliable tools to regression  
(output)

\* ← هم صا، روا بفعلوا  
indices عند تفكرنا (variables)

(لأنه في امتحانه بينه 10 و 11 بدو تعديل)

| Condition                                   | code | Weight |
|---------------------------------------------|------|--------|
| Diabetes without complications              |      | 1      |
| Diabetes with complications                 |      | 2      |
| Liver disease Mild                          |      | 1      |
| Liver disease Moderate to sever             |      | 3      |
| Malignancy (Lymphoma, Leukaemia, localised) |      | 2      |
| Malignancy (metastatic)                     |      | 6      |
| Paraplegia and hemiplegia                   |      | 2      |
| Renal disease                               |      | 2      |
| AIDS                                        |      | 6      |

حليل  
بدا  
بالأردنه

| Condition                           | code | Weight |
|-------------------------------------|------|--------|
| Myocardial infarction               |      | 1      |
| Congestive heart failure            |      | 1      |
| Peripheral vascular disease         |      | 1      |
| Cerebrovascular disease             |      | 1      |
| Dementia                            |      | 1      |
| Chronic pulmonary disease           |      | 1      |
| Connective tissue disease/rheumatic |      | 1      |
| Peptic ulcer disease                |      | 1      |

CCI scores of 1–2; moderate, with CCI scores of 3–4; and severe, with CCI scores ≥5.

للتصالح في الأردنه لأنه صلا حاز infection

<https://www.mdcalc.com/charlson-comorbidity-index-cci>

لأنه بدا

\* managmat to infection

ليس  
عقوبة  
سنه في الأردنه