

The Kuwait ICD-11 experience

Lessons learned



WHO ICD-11 implementation strategy and country experiences

16 May 2022

Kuwait ICD profile



Population

4.8 million



MOH

main funder,
provider &
only regulator of
healthcare



Funding

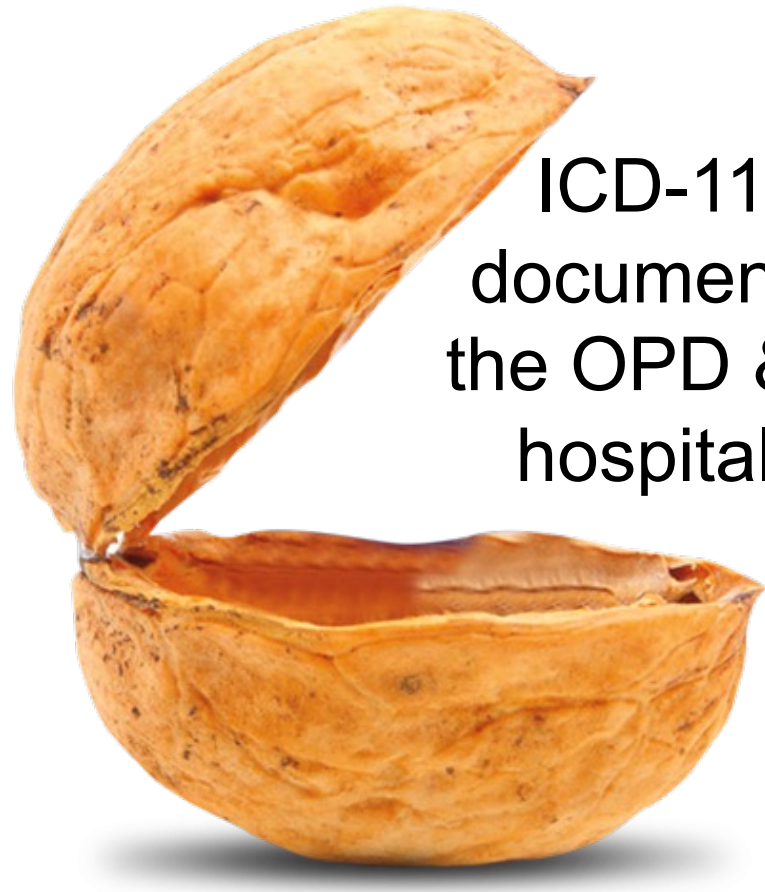
Annual budgets
(No DRG system)



ICD-10

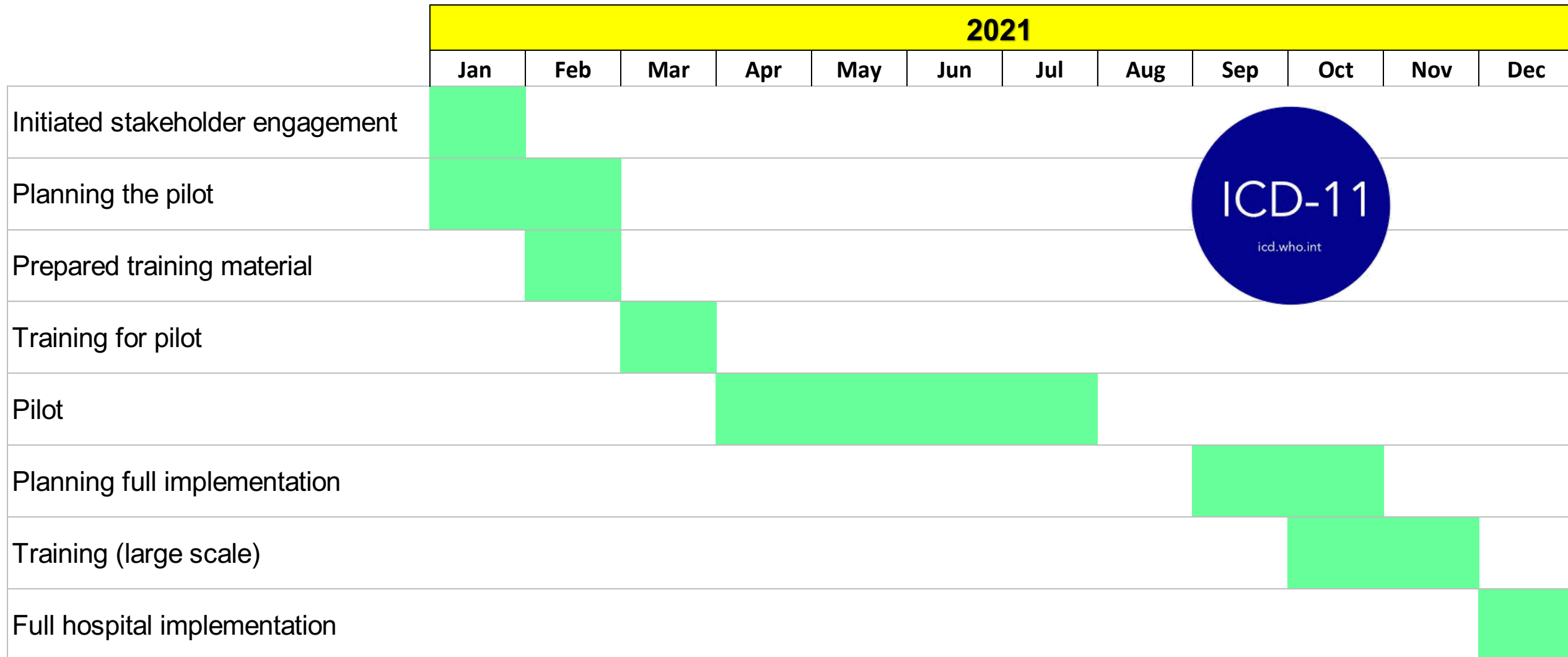
Since 1996 - coding
discharge diagnoses,
basis of national
morbidity health statistics

Kuwait ICD-11 experience in a nutshell



ICD-11 was successfully implemented for documenting final diagnoses by physicians in the OPD & inpatient wards in the largest public hospital by installing the coding tool on the hospital information system

Kuwait ICD-11 journey



On HIS user interface

Notes

Final Diagnosis

Principal Diagnosis **STEMI** X

Other Diagnosis


Dis. Unit .. c Discharge Doctor His Administrator

Print Discharge Report Discharge Summary

Exit

STEMI

HR 69
LEAD II



ICD-11

On the HIS user interface

CTW Test x +

Not secure | 10.243.16.45/icd.html?pid=2129580&visitno=11725965&formname=nip001007_far&deathtype=A

Apps ★ Bookmarks G iGoogle U Unwrap It! Unwrap...

Searchbox:

BA41.0 Acute ST elevation myocardial infarction x Save

Guessing the word being typed...

Word list
sort: Relatedness/repetition ▾

stemi

Destination Entities

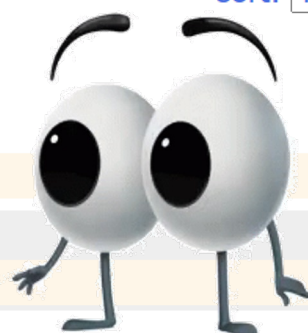

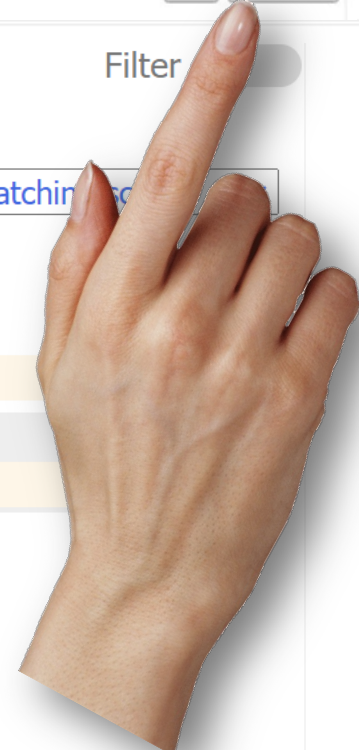

BA42.0 Subsequent myocardial infarction, **STEMI**

BA41.0 Acute ST elevation myocardial infarction
STEMI - [ST elevation myocardial infarction] ▾

BA41.1 Acute non-ST elevation myocardial infarction
non **STEMI** - [non ST elevation myocardial infarction]

Filter

sort: Matching



On the HIS user interface



Notes

Final Diagnosis

Principal Diagnosis

STEMI

X

Acute ST elevation myocardial infarction

X

Other Diagnosis

X

X

X

X

Dis. Unit

..

c

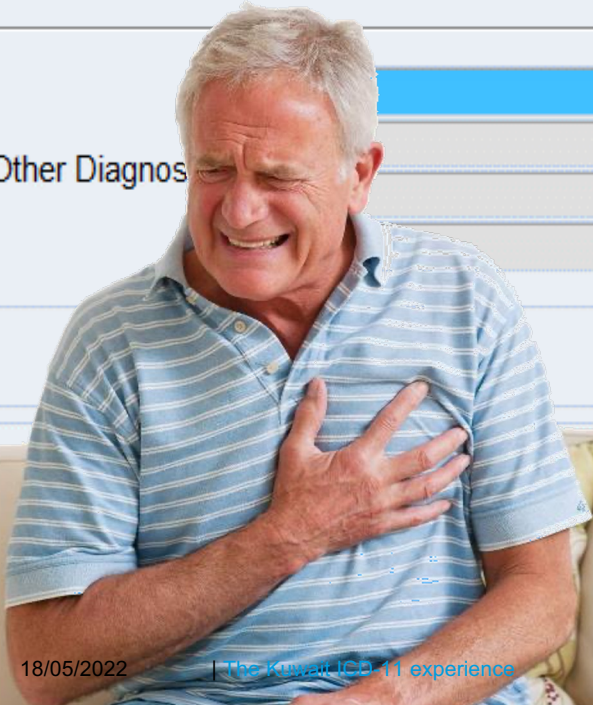
Discharge Doctor

His Administrator

Print Discharge Report

Discharge Summary

Exit



In the database

Automatically captured



Free text diagnosis by Dr.

ICD-11
code

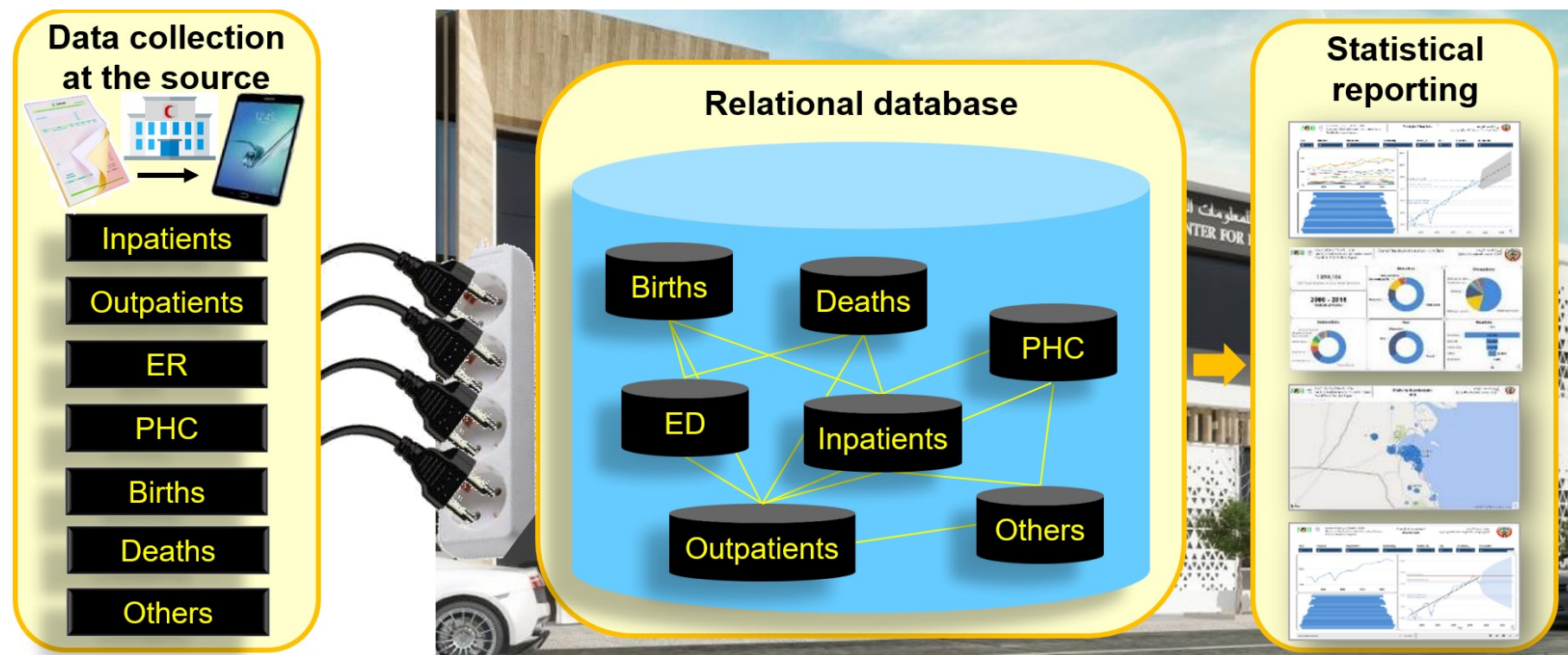
ICD-11
URI

Principal diagnosis free text	Principal diag. ICD-11 code	Principal diag. ICD-11 URI
DKA	Diabetic ketoacidosis without coma 5A22.0	http://id.who.int/icd/release/11/2020-0
CVA	Stroke not known if ischaemic or haemorrhagic 8B20	http://id.who.int/icd/release/11/2020-0
COVID pneumonia	COVID-19 with pneumonia, SARS-CoV-2 0CA40.1	http://id.who.int/icd/entity/201495528
ANGINA STABLE	Angina pectoris, unspecified 8A40.2	http://id.who.int/icd/release/11/2020-0
COVID PNEUMONIA	COVID-19 with pneumonia, SARS-CoV-2 0CA40.1	http://id.who.int/icd/entity/201495528
PNEUMONIA	Pneumonia, organism unspecified 0A40.2	http://id.who.int/icd/release/11/2020-0
DVT	Lower limb deep vein thrombosis 8G71.4	http://id.who.int/icd/release/11/2020-0
6TH NERVE PALS	Sixth nerve palsy - Neuritis of a 8C81.2	http://id.who.int/icd/release/11/2020-0
COVID PNEUMONIA	COVID-19 with pneumonia, SARS-CoV-2 0CA40.1	http://id.who.int/icd/entity/201495528
SCB AND CHEST PAIN	Interstitial lung diseases associated 8B05.1	http://id.who.int/icd/release/11/2020-0
CVA	Stroke not known if ischaemic or haemorrhagic 8B20	http://id.who.int/icd/release/11/2020-0
COVID	COVID-19 with pneumonia, SARS-CoV-2 0CA40.1	http://id.who.int/icd/entity/201495528
COVID +VE	COVID-19, virus identified - 0CA40.0	http://id.who.int/icd/release/11/2020-0
ANEMIA AND SYNCOPAL ATT	Iron deficiency anaemia, unspecified 5A00.2	http://id.who.int/icd/release/11/2020-0
Epilepsy	Epilepsy or seizures, unspecified 8A6Z	http://id.who.int/icd/release/11/2020-0

Facilitators

National automation project

Moving from paper-based system for national reporting to an **electronic** one



National automation project

Moving from paper-based system for national reporting to an **electronic** one

National health system requirements

Need for a **DRG** system using WHO classifications



The image shows two overlapping web portals. The top portal is the 'ICD-11 for Mortality and Morbidity Statistics' (Version: 02/2022) with a dark blue header. It features a search bar, a link to '[Advanced Search]', and navigation buttons for 'Browse', 'Coding Tool', 'Special Views', and 'Info'. A dropdown menu is open, showing 'ICD-11 for Mortality and Morbidity' with sub-items '01 Certain infectious or parasitic' and '02 Neoplasms'. The bottom portal is the 'International Classification of Health Interventions (ICHI)' with an orange header. It also has a search bar, '[Advanced Search]', and navigation buttons for 'Home', 'Foundation', 'Proposals', and 'Info'. A dropdown menu is open, showing 'International Classification of Health Interventions (ICHI)' with a sub-item 'ICHI Category'. To the right of the dropdown is a 'WHO-FIC Maintenance Platform' section. The text 'Signed in a' is visible in the top right corner of the ICHI portal.

National automation project

Moving from paper-based system for national reporting to an **electronic** one

National health system requirements

Need for a **DRG** system using WHO classifications

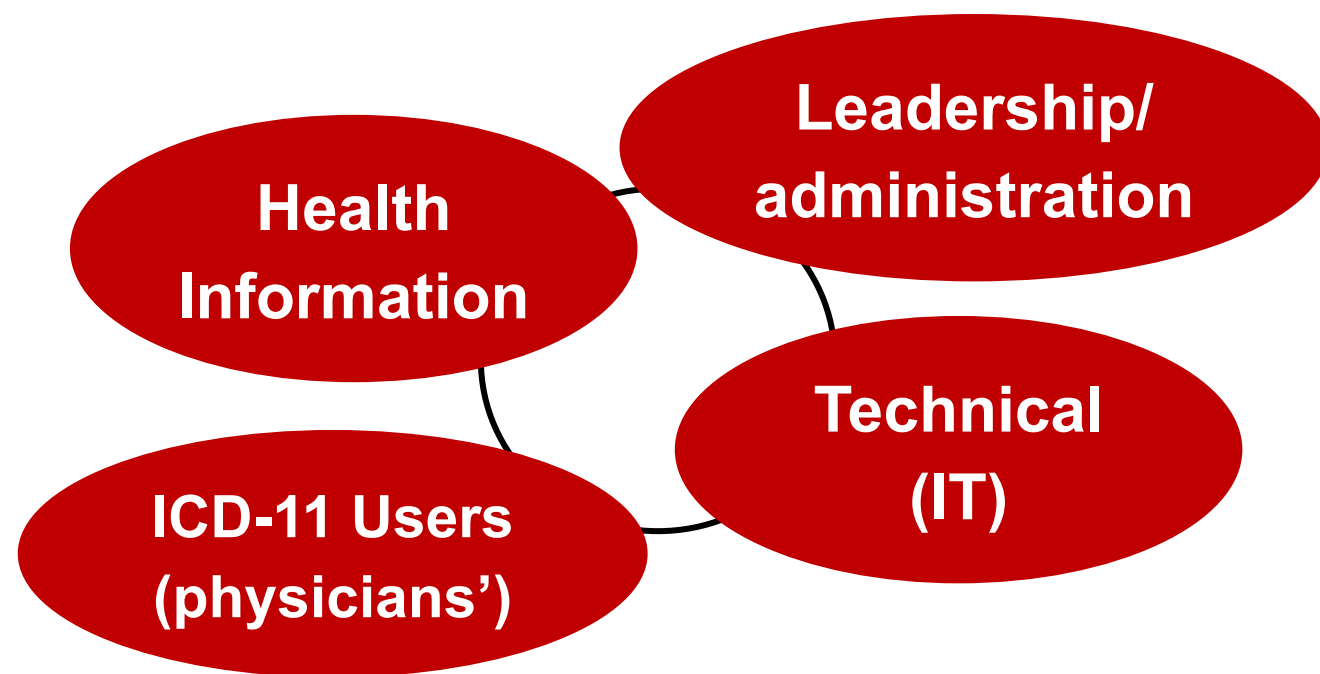
National challenge

Lack of experienced qualified medical **coders**



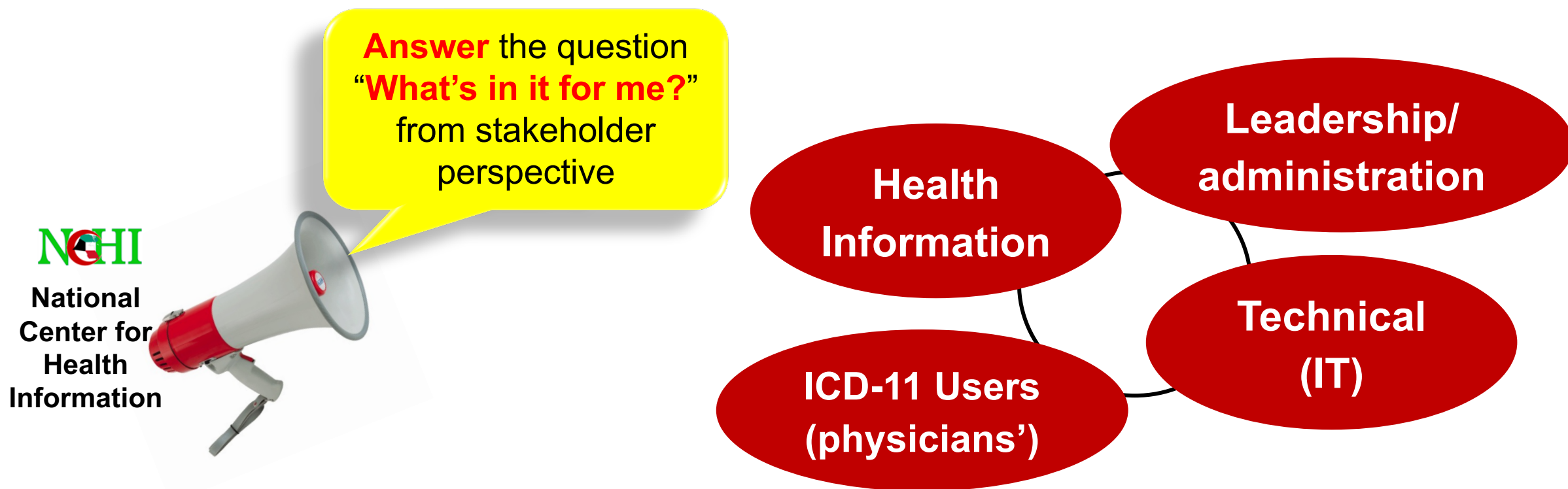
Leadership commitment and support

Benefit from leadership commitment to guarantee formal **approvals**, **resources**, and effective communication between different **stakeholders**



Engaging stakeholders & effective communication

Change management process requires tailored stakeholder-specific messages for persuasion - the **readiness** phase



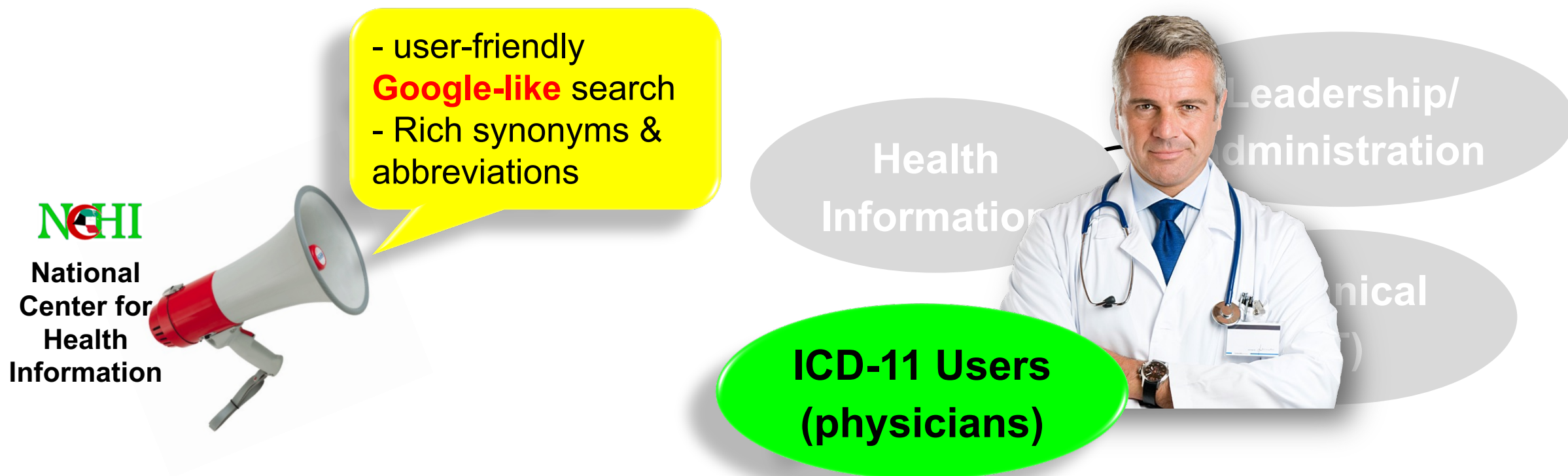
Engaging stakeholders & effective communication

Change management process requires tailored stakeholder-specific messages for persuasion - the **readiness** phase



Engaging stakeholders & effective communication

Change management process requires tailored stakeholder-specific messages for persuasion - the **readiness** phase



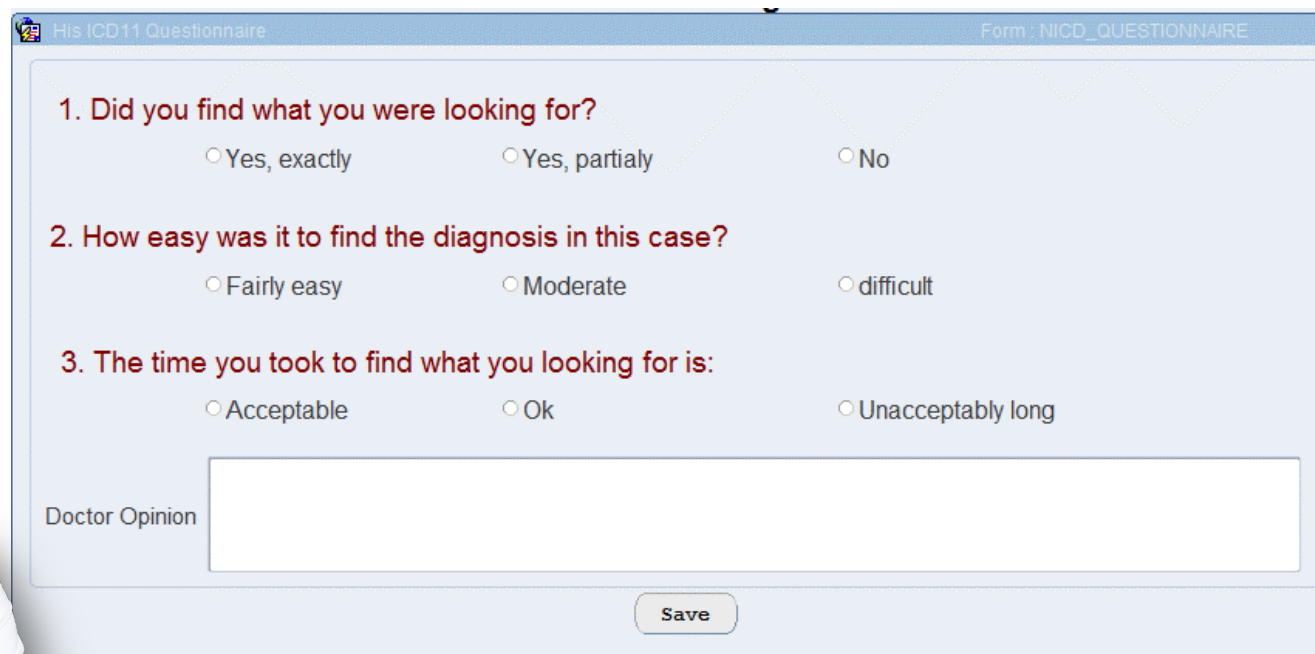
Engaging stakeholders & effective communication

Change management process requires tailored stakeholder-specific messages for persuasion - the **readiness** phase



Engaging stakeholders & effective communication

Change management process requires capturing the voice of the users (physicians) as they experiment with ICD-11- the **adoption** phase



His ICD 11 Questionnaire Form: NICD_QUESTIONNAIRE

1. Did you find what you were looking for?

☐ Yes, exactly ☐ Yes, partially ☐ No

2. How easy was it to find the diagnosis in this case?

☐ Fairly easy ☐ Moderate ☐ difficult

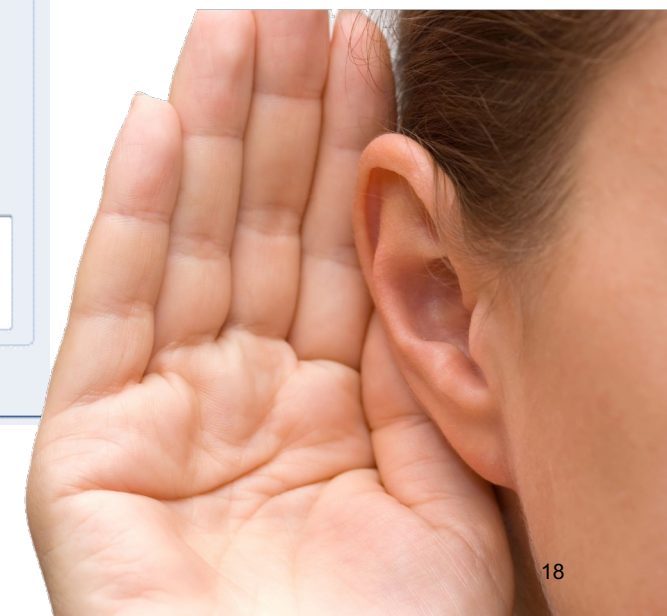
3. The time you took to find what you looking for is:

☐ Acceptable ☐ Ok ☐ Unacceptably long

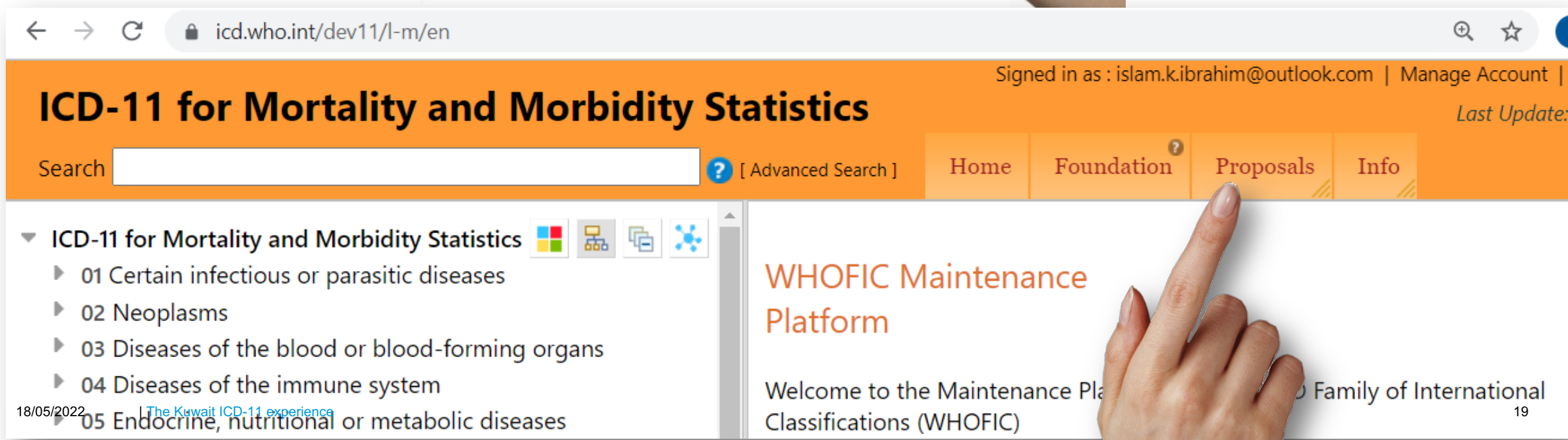
Doctor Opinion

Save

**Brief
user-experience
survey**



Engaging stakeholders & effective communication



← → ↺ icd.who.int/dev11/l-m/en 🔍 ☆

Signed in as : islam.k.ibrahim@outlook.com | Manage Account | Last Update:

ICD-11 for Mortality and Morbidity Statistics

Search ? [Advanced Search]

Home Foundation **Proposals** Info

- ▼ ICD-11 for Mortality and Morbidity Statistics
 - ▶ 01 Certain infectious or parasitic diseases
 - ▶ 02 Neoplasms
 - ▶ 03 Diseases of the blood or blood-forming organs
 - ▶ 04 Diseases of the immune system
 - ▶ 05 Endocrine, nutritional or metabolic diseases

WHOFIC Maintenance Platform

Welcome to the Maintenance Platform of the Family of International Classifications (WHOFIC)

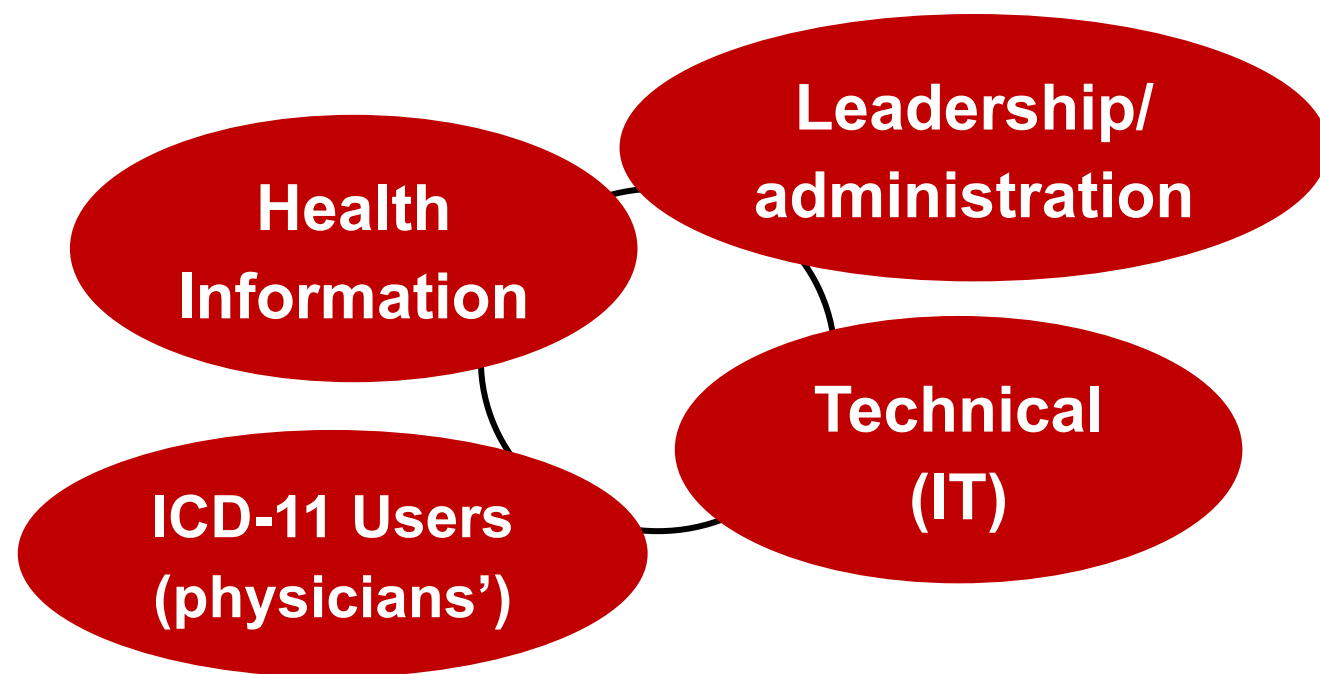
18/05/2022 | The Kuwait ICD-11 experience

Team approach

- **Multidisciplinary** team involving representatives of all stakeholders
- Users (physicians) **accept change** when involved in making decisions



Familiar with local
work environment &
culture

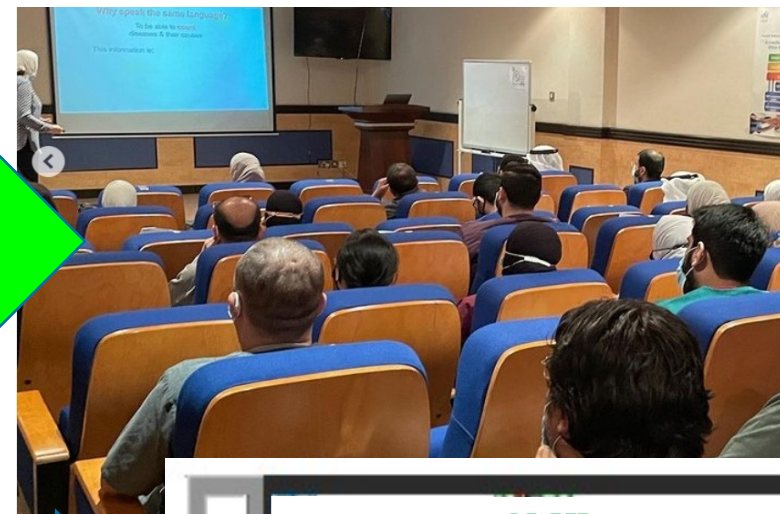


Training

- Variable options to **access** (attend in person, watch video)
- **Short** duration



2 hrs including
practical exercise

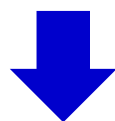


10 min ICD-11
+ 10 min Dx documentation

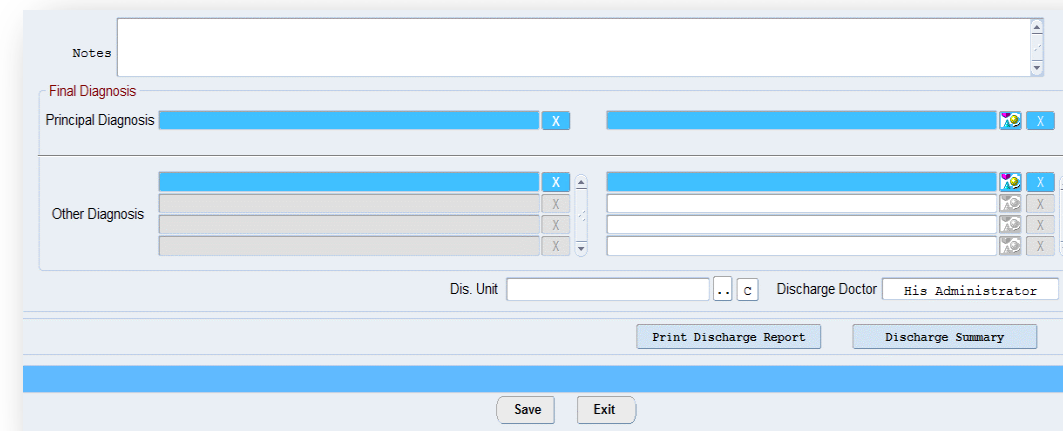
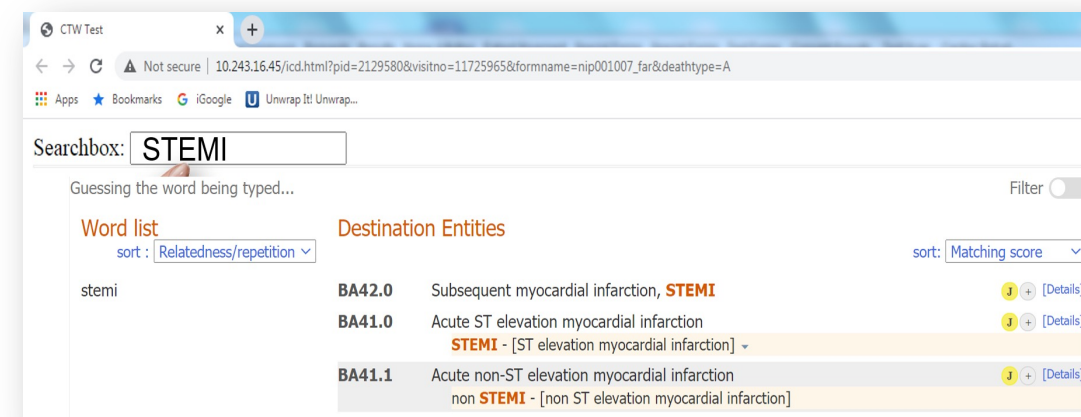


Training

- Variable options to **access** (attend in person, watch video)
- **Short** duration
- Uses **screenshots** from own hospital HIS for familiarity

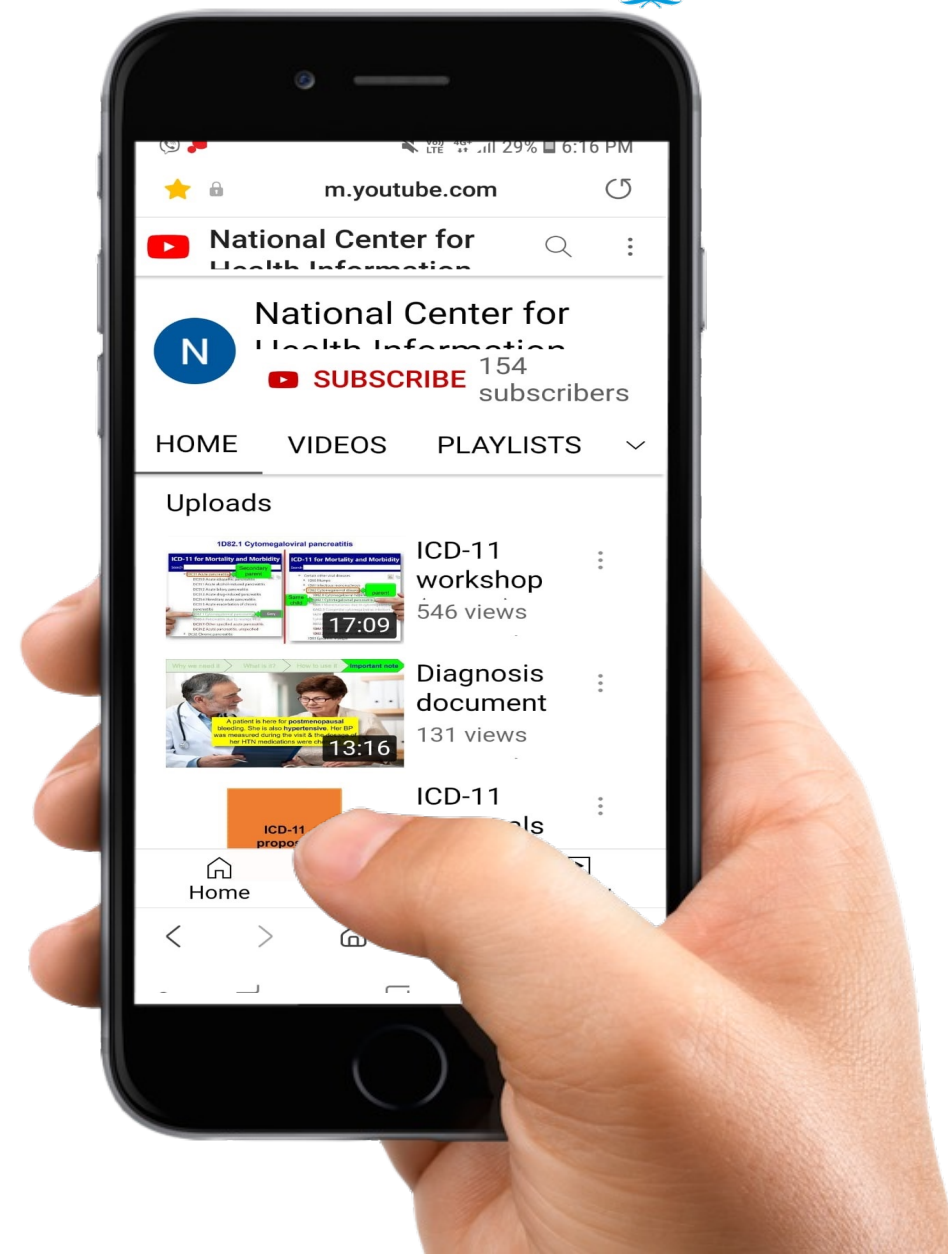


- Focus on changes made to their own HIS not on ICD-11 codes per se
- Reduced potential resistance to change by clinicians

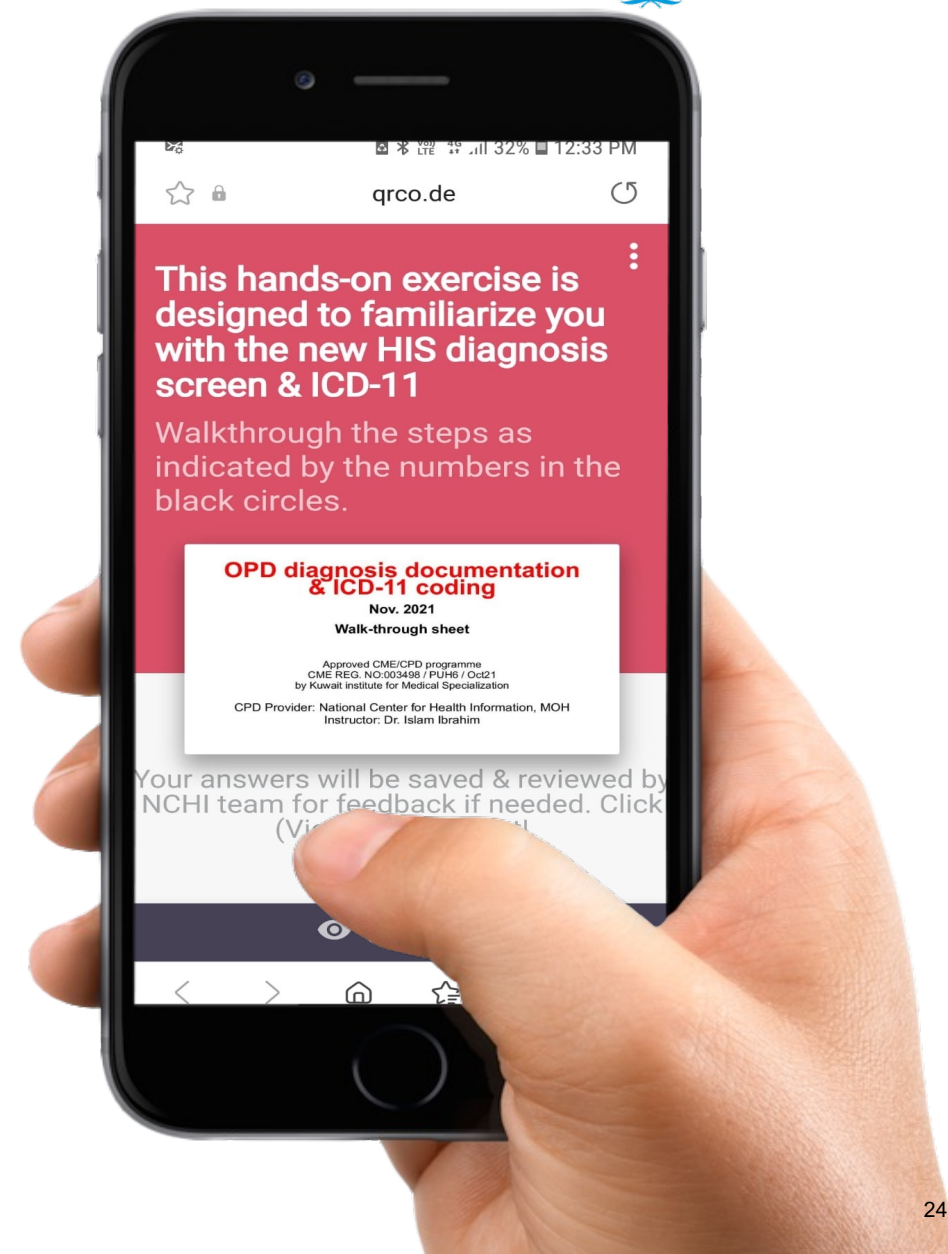
Training

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- Wide dissemination using **social media** (WhatsApp, YouTube)



Training

- Variable options to **access** (attend in person, watch video)
- **Short** duration
- Uses **screenshots** from own hospital HIS for familiarity
- Wide dissemination using **social media** (WhatsApp, YouTube)
- **Hands-on** exercise (computer lab for pilot, virtual simulation for full implementation)

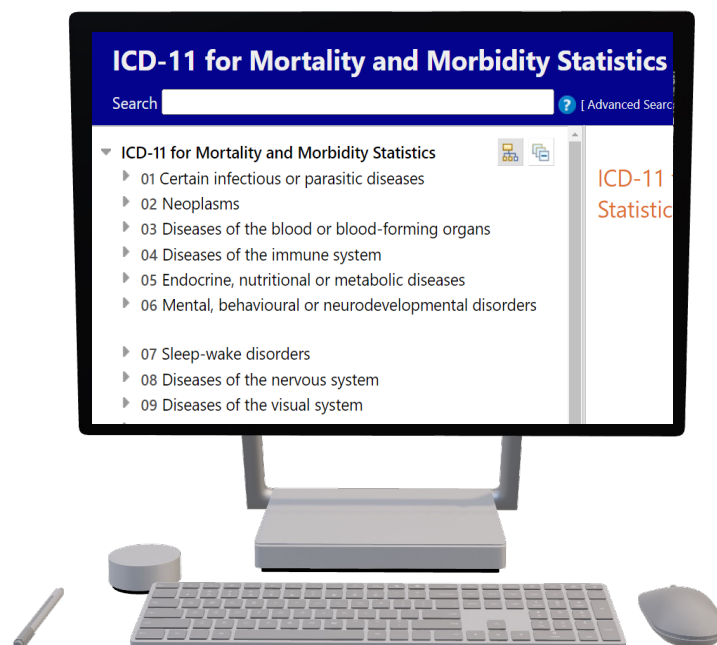
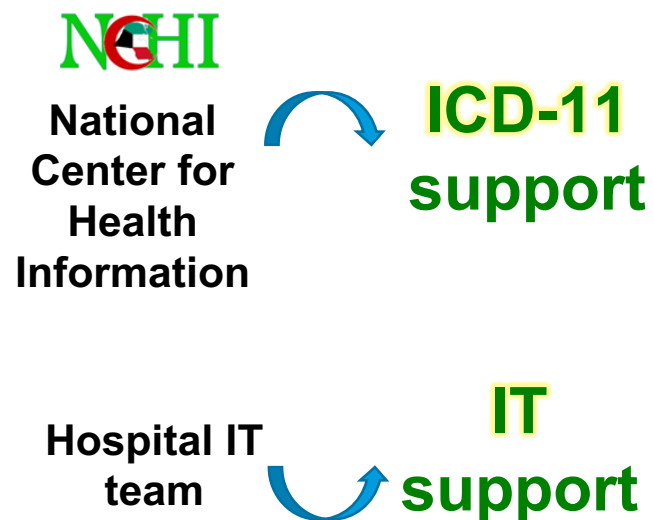


Training



On-site support

- During the pilot
- At the beginning of full-hospital implementation



Daily rounds on all computer workstations



Phone numbers were available at the workstations to provide around-the-clock support

Opportunity for future CDI

ICD-11 codes will only truly reflect the final diagnoses at discharge if the **correct diagnosis is documented** by the physician.

Implementing ICD-11 onto the system was a chance for NCHI to improve the final diagnosis screen by implementing a simple change, namely distinguishing between the **principal** diagnosis & **other** diagnoses.

Final Diagnosis

Principal Diagnosis X X

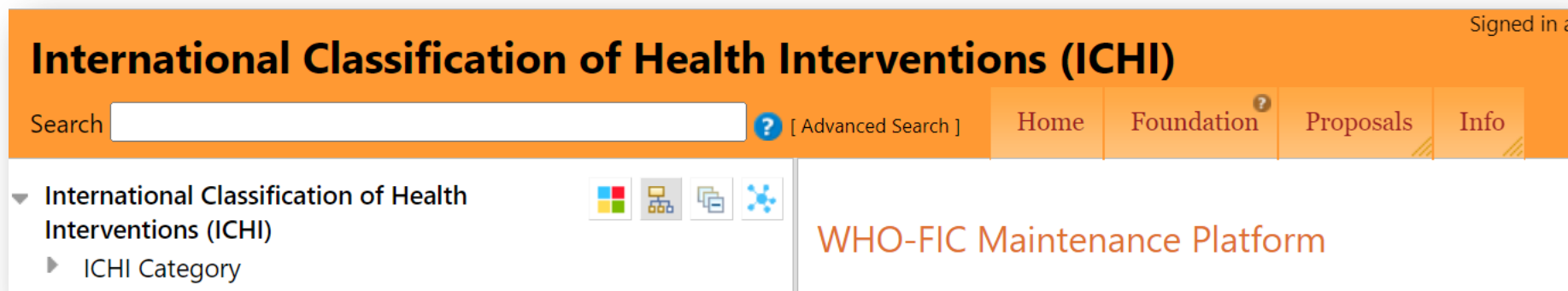
Other Diagnosis

<input type="text"/>	X	<input type="text"/>	X
<input type="text"/>	X	<input type="text"/>	X
<input type="text"/>	X	<input type="text"/>	X
<input type="text"/>	X	<input type="text"/>	X

Challenges & other considerations

Procedure coding and DRG systems

- Only Beta version of ICHI available
- No **ICHI** API yet
- Awaiting **DRG** system that uses both ICD-11 and ICHI



Physicians as ICD-11 users

- Lack of interest in coding guidelines & insufficient time for training on **morbidity coding guidelines**
- In case of DRG system, experienced qualified coders are still required



- Fewer medical coders needed, as the code for each diagnosis is assigned automatically when the physician uses the ICD-11 coding tool to document the diagnosis
- Shift in HIM professionals' time & skills towards much needed roles, such as auditing and CDI



Comparing pilot results between countries

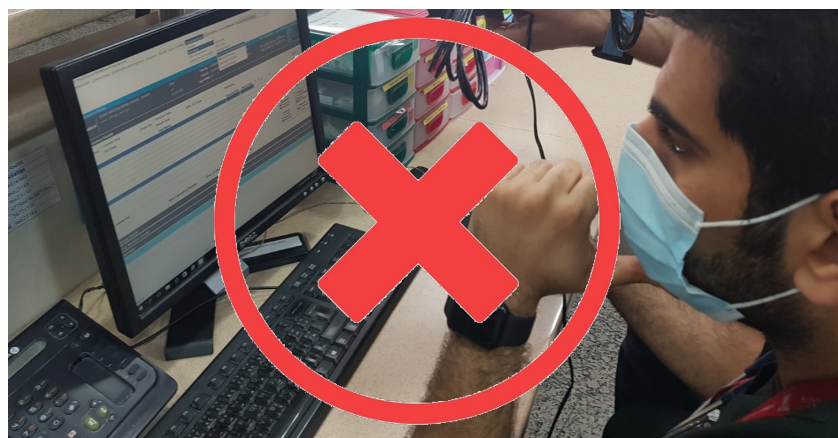
- Should be treated with caution!
- Results from ICD-11 morbidity pilots will not only reflect ICD-11 as a classification but will also be confounded by the **prior quality of clinical documentation**



IT issues

IT problems were promptly resolved

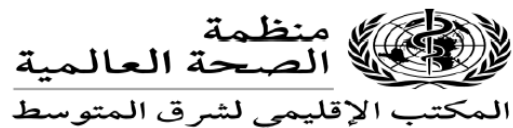
Otherwise, we risk **physician dissatisfaction** with the whole experience, as physicians may come to associate ICD-11 with HIS problems.



Sharing the experience!



ورشة عمل جاهزية تطبيق الترميز الطبي الدولي النسخة 11 في دول مجلس التعاون الخليجي
Readiness to adopt ICD11 Implementation in GCC



World Health Organization
REGIONAL OFFICE FOR THE Eastern Mediterranean

Classification of Diseases 11th Revision implementation in countries, 7th -8th April 2021

Promotion of International Classification of Diseases 11th Revision (ICD-11) and International Classification of Health Interventions (ICHI) in morbidity, mortality, and medical intervention registration system

Tentative dates: 23 to 24 August 2021



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7-8 Dec, 2021

WHO-FIC Annual Network Meeting 18-22 October 2021

‘Unleashing the power of innovation in health information’

Sharing the experience!



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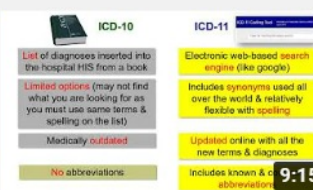
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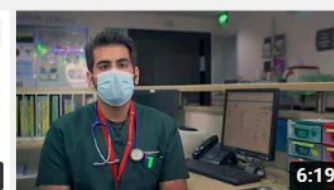
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clinicians

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➤ [Int J Environ Res Public Health](#). 2022 Mar 5;19(5):3057. doi: 10.3390/ijerph19053057.

ICD-11 Morbidity Pilot in Kuwait: Methodology and Lessons Learned for Future Implementation

[Islam Ibrahim](#)¹, [Mohammad Alrashidi](#)², [Mustafa Al-Salamin](#)¹, [Nenad Kostanjsek](#)³, [Robert Jakob](#)³, [Suhair Azam](#)¹, [Naela Al-Mazeedi](#)², [Fatima Al-Asoomi](#)¹

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