

# **International certificate for ICD-10 mortality and morbidity coding**

**The 6th Meeting of the Asia Pacific Network of  
the WHO Family of International Classifications**

**Bangkok**

**July 18, 2013**

**Joon Hong (Korea)**



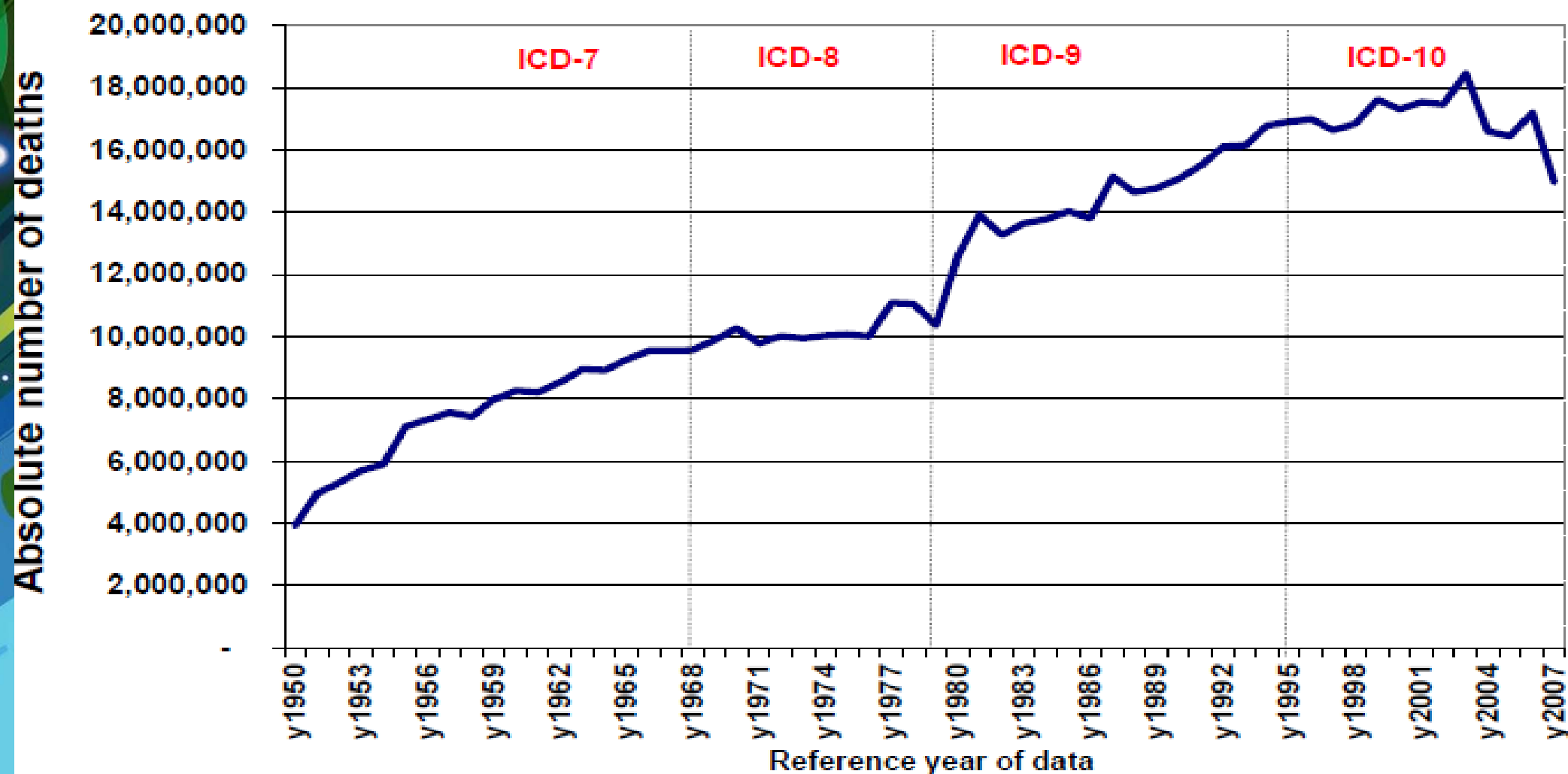
# **State of WHOFIC**

## **Classifications, Terminologies and Standards**

[www.who.int/classifications](http://www.who.int/classifications)

**October, 2012**

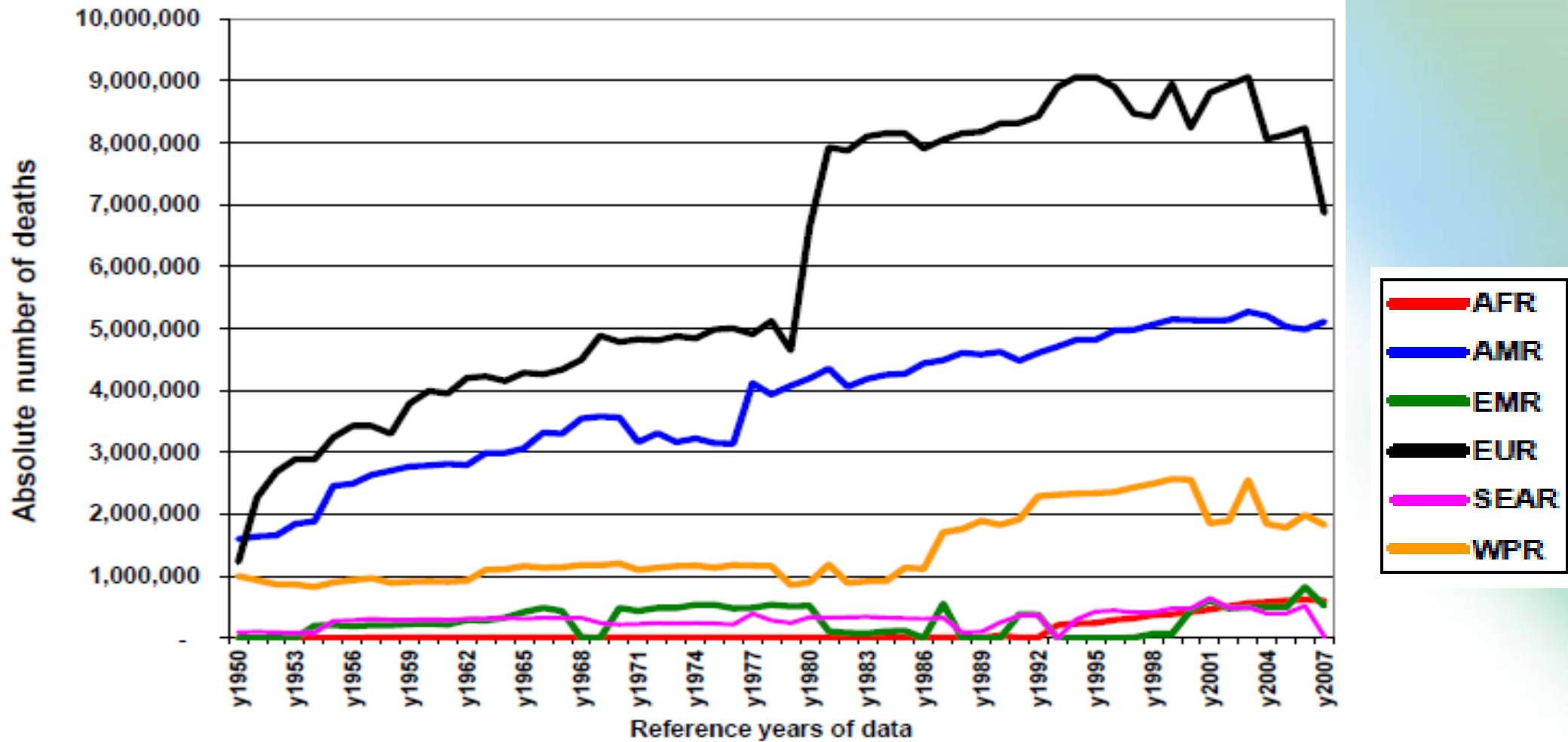
## Number of deaths reported to WHO with ICD codes 1950 - 2007



Source: WHO Mortality Data base as of 19 Oct 2011

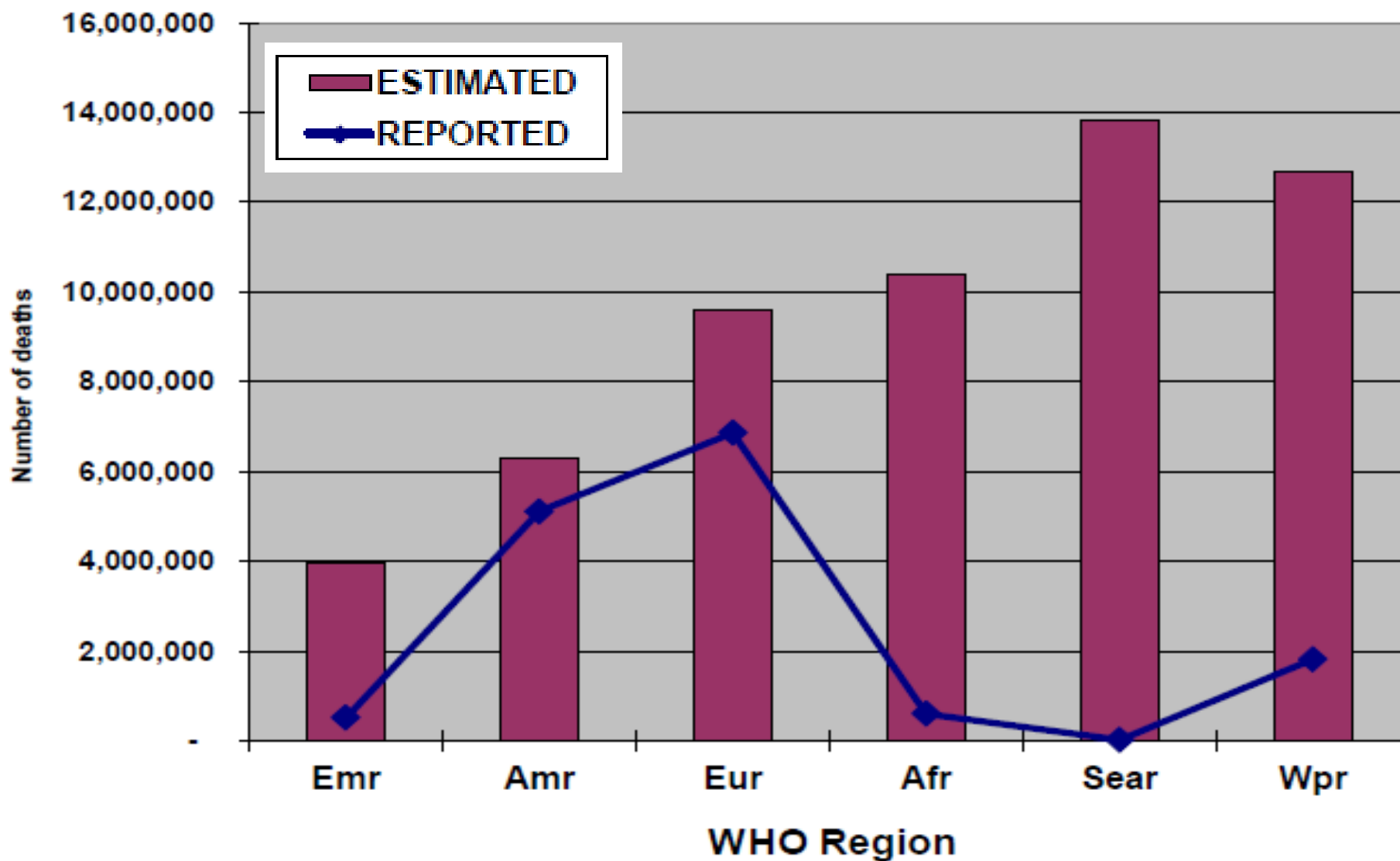


## Number of deaths reported to WHO - by region 1950 - 2007



Source: WHO Mortality Data base as of 19 Oct 2011

## Reported deaths v/s estimated deaths, 2007





**WORLD HEALTH  
STATISTICS  
2012**

Part II  
**Highlighted  
topics**

## WHO says

- Two thirds of deaths are not counted
- Only one in five countries produces high-quality data on causes of death.
- The two most populous countries of the world, China and India, use the sample registration approaches to generate representative mortality statistics instead of the full functioning registration.

- The urgent need for investment in improving death registration in many countries and the time for improvement is now.

# Background of Mortality and Morbidity Coding Exam

- **WHO-FIC Education and Implementation Committee**
- **To produce quality data comparable internationally**
- **To enhance the importance of coding data and coders**

# The process of implementing mortality coding exam

<b>2000</b>	<b>WHO-FIC and IFHIMA contracted to collaborate to process international certificate project</b>
<b>2004</b>	<b>Organized WHO-FIC-IFHIMA Joint Collaboration(JC)</b>
<b>2007</b>	<b>Conducted in Korea first in 2007 and followed by Japan, U.S., Canada, U.K, and Brazil</b>
<b>Successful candidates</b>	<b>Coder 60 Coder/Trainer 19</b>



# Process of morbidity coding pilot test

- 2008** Identified the necessity of conducting morbidity coding exam by surveying WHO-FIC people
- 2010** Collected exam questions from many countries for morbidity coding pilot test. The test was not for awarding certificate but for collecting information
- 2011** Conducted in Japan, Jamaica, Sri Lanka, and Indonesia

# Pilot examination

Part	Number of questions	Number of points(%)	Time allotted*
Multiple choice	20	20(13.0)	20
Coding Dx	30	81(52.6)	90
Scenario	10 short 5 long	31 22 (34.4)	70
<b>Total</b>		<b>154 (100.0)</b>	<b>180 min.</b>

•Does not include time allotted to break and evaluation of questions

# Administration of the pilot tests in six countries

Country	Number	Attribute
Korea	48	Hospital coders Lecturers in the colleges and universities
Japan	52	JHA distant training course lecturers Designated universities lecturers Designated vocational school lecturers Hospital coders
Jamaica	25	Hospital coders
Sri Lanka	6	4 hospital coders(6.5 years coding experience) 2 Medical record assistants
Sweden	26 29	Hospital coders
Indonesia	105	92 coders, 12 instructors, 1 dentist

# Country, examinees and results pilot morbidity coding examinations

Country(when)	Number of examinees
Korea (Oct. 2010)	48
Japan (Jan. 2011)	52
Jamaica (July 2011)	25
Sri Lanka (July 2011)	6
Sweden * (Sept. 2011 Nov. 2011)	26 29 } 55
Indonesia (Nov. 2012)	105

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# Missing or incorrect rate by type of code, by country

	Korea	Japan	Jamaica	Sri Lanka	Indonesia
	Number(%*)	Number(%*)	Number(%*)	Number(%*)	Number(%*)
<b>Incorrect or missing</b>					
External cause	283(73.7)	234(64.3)	117( 58.5)	20(41.7)	746(88.8)
Morphology	163(56.6)	178(57.1)	150(100.0)	10(27.8)	515(81.7)
Other codes**	464(30.2)	991(51.5)	604( 62.3)	93(41.9)	
Main condition	415(28.8)	615(39.4)	413( 55.1)	36(20.0)	1939(55.7)
Incorrect selection of main condition	231(16.0)	314(20.1)	56( 7.5)	0( 0.0)	182( 5.8)
5 <sup>th</sup> digit code	138(28.8)	61(14.7)	76( 50.7)	12(33.3)	447(47.3)
Over coding	49( 3.4)	73( 4.7)	23( 3.1)	3( 1.7)	
4 <sup>th</sup> digit code	198( 7.4)	131( 4.5)	121( 10.3)	14( 5.0)	664(10.7)

\* Number of codes missing or incorrect x 100/the number of maximum applicable codes

\*\* Total number of codes minus codes of Main condition, Morphology, and External cause

# Response of the Examinees

## Difficulty of exam questions

	Number (%)		
	Korea	Japan	Jamaica
Difficult	<u>37 ( 77.1)</u>	<u>36( 69.2)</u>	9( 36.0)
Intermediate	9 ( 18.8)	11( 21.2)	<u>16( 64.0)</u>
Easy	1 ( 2.1)	0( 0.0)	0( 0.0)
No answer	1 ( 2.1)	5( 9.6)	0 ( 0.0)
	<b>48 (100.1)</b>	<b>52(100.0)</b>	<b>25 (100.0)</b>

# **Motives of the Applicants**

- 1. To evaluate coding skills**
- 2. To know the pattern of questions of international coding exam**
- 3. Out of curiosity**
- 4. On the advice of others**
- 5. Other**

# Findings

- **Need to reinforce coding education**
- **Common areas which need coding education**
  - Correct use of combined codes
  - The meaning of  $\diamond$  and # mark in neoplasm table
  - Correct assignment of T code or Z code for complication or follow-up care of internal prosthetic device
  - Assigning 4<sup>th</sup> and 5<sup>th</sup> digit code
  - Assigning additional and optional codes including external cause code and morphology code
- **Need to discuss the issues concerning the inclusion of**
  - Morphology code
  - External cause code with 5<sup>th</sup> digit
  - Additional/optional code



# Problems identified

- **Use of different versions of ICD-10 by countries, and even within the same country, resulting in different codes for the same diagnosis**
- **Cost for countries to adopt the new ICD version and translate it into their language**
- **Coding without using ICD-10 Vol.III**
- **Modified coding instructions that differ by country and from the international standard guidelines**

# Problems identified

- **Human and material resources and organization for managing test especially in developing countries**
- **Translation of the exam questions when not done by translator knowledgeable in medical terminology and ICD-10**
- **Communication between WHO-FIC EIC and organizer of the exam in the country administering the exam**
- **Purpose of the exam – certification or assessment?**

# Lessons learned

- **Good communication is essential**
  - Exam protocol
  - Marking scheme
  - Translation of the exam questions
- **Using same version of ICD-10 is required**
- **Timing matters**
  - Scheduling of exam
  - Time allotted to answering questions
- **More detailed coding instructions by WHO (Vol. 2) are required**
- **Importance of identifying the weak points of morbidity coding for developing/improving coding education program**
- **Poor test results can provide useful information**

# Decisions by WHO-FIC EIC for future action

- **Maintain the development of exam to certify morbidity coders as a long-term objective**
  - ✓ **Continue to develop the exam to be available for individuals to assess their own abilities, but not tied to any certification at present**
  - ✓ **Continue the promotion of the exam**
  - ✓ **Continue collecting exam questions from many countries**
  - ✓ **Make the answer key for the collected exam questions by ICD-11 when available**
- **Explore development of an on-line exam for use with the web-based training tool by WHO**
- **Use existing questions for ICD-11 field trial**



To produce high quality mortality morbidity data . . .

