INTRODUCTION

Under-notification of anaphylaxis deaths (Allergy 2012)

"Allergy and hypersensitivity conditions" section in **ICD-11 Beta draft** (2015)

Agreement of adding allergy and hypersensitivity conditions as underlying cause of death in death certificates

Actions to implement allergy in the ICD-11

Online ICD-11 Beta (2012)

Decreasing the under-notification of anaphylaxis mortality data through the ICD-11 (Allergy 2016)

ICD-11 release (2018)



Presentation of the ICD-11 to the World **Health Assembly** (2019)



CHANGING THE HISTORY OF **ANAPHYLAXIS MORTALITY STATISTICS** THROUGH THE INTERNATIONAL CLASSIFICATION OF DISEASES (ICD)-11

INNOVATION

AWARD

MID-CAREER SCIENTIST

Luciana KASE

TANNO

METHODS

ANAPHYLAXIS ICD-10 CODES (2015 VERSION)

Chapter 04 Disorders of the immune system Chapter XIX Injury, poisoning and certain other consequences of external causes (S00-T98)

Section Allergic and hypersensitivity Other and unspecified effects of external causes conditions

(T66-T78) Adverse effects, not elsewhere classified

causes. For multiple coding purposes this category may be used as an additional code to identify the effects of conditions classified elsewhere

T78.0 Anaphylactic shock due to adverse food reaction

T78.1 Other adverse food reactions, not elsewhere classified

T78.2 Anaphylactic shock, unspecified

Allergic shock NOS Anaphylactic

Anapylaxis

T78.3 Angioneurotic oedema Giant urticaria

Quincke oedema T78.3 Allergy, unspecified Allergic reaction NOS **Subsection Anaphylaxis**

4B50 Anaphylaxis due to allergic reaction to

Anaphylaxis ICD-11 codes (frozen May 2015 version

4B51 Drug-induced anaphylaxis 4B52 Anaphylaxis due to insect venom

4B53 Anaphylaxis provoked by physical

4B53.1 Exercice-induced anaphylaxis 4B53.2 Cold-induced anaphylaxis 4B53.Y Anaphylaxis provoked by other specified physical factors 4B53.Z Anaphylaxis provoked by unspecified physical factors

4B54 Anaphylaxis due to inhaled allergens

4B55 Anaphylaxis due to contact with allergens

ICD-11 starting

development

(2007)

RESULTS

AUTHORS: **Luciana Kase Tanno**, Pascal Demoly

ALLERGY in ICD -11

concerning the legal status of any country, territory, city or area or of its authoritis represent approximate border lines for which there may not yet be full agreement.

CONCLUSION



BRAZILIAN MORTALITY INFORMATION SYSTEM (SIM), DATA EXTRACTED **MAY 2011**

Total **3,296,247 records**, from **2008 to 2010**

3,638 deaths had any ICD-10 code related to anaphylaxis listed as the underlying or as contributing causes of death

2012 ANALYSIS (ALLERGY, 2012), BASED ON ICD-10 (2010 VERSION)

"Possible **ANAPHYLAXIS DEATHS** (Manual review of a codes recorded o any lines parts 1 the death certificates

"DEFINITIVE ANAPHYLAXIS DEATHS (Specific anaphylaxi codes – T780, T782 T805 and T886 contributing cause c

"Possible **ANAPHYLAXIS DEATHS** N = 128

"DEFINITIVE N = 370

ANAPHYLAXIS DEATHS"

Total 498 anaphylaxis deaths Average anaphylaxis death rate: 0.87/million/year

deaths

606 200 100 Possible anaphylaxis **Definitive anaphylaxis** definitive anaphylaxis

■2012 (ICD-10) ■2016 (ICD-11)

deaths

2016 ANALYSIS, BASED ON ICD-11 BETA DRAFT (MARCH 2016

"DEFINITIVE ANAPHYLAXIS

DEATHS"

(Specific anaphylaxis codes

as contributing cause of

death + Manual review of

each description in death

certificates)

DEATHS"

N = 606

"Possible anaphylaxis DEATHS" (Manual review of each description in death certificates: isolated description of allergic or hypersensitivity clinical presentations described as

contributing cause of death)

"DEFINITIVE ANAPHYLAXIS "POSSIBLE ANAPHYLAXIS DEATHS' N = 33

> Total 639 anaphylaxis deaths Average anaphylaxis death rate: 1.12/million/year

> > ↑ Sensitivity: Identification of cases 25% higher **Accuracy:** Reaching 95% for

> > > deaths

	2012 ANALYSIS	2016 ANALYSIS
	Total: 489 (%)	Total: 639 (%)
Gender		
Men	288 (58)	376 (59)
Women	210 (42)	264 (41)
Age (years)		
Chidren (0-15)	43 (9)	51 (8)
Young adults (15-40)	102 (20)	148 (23)
Adults (40-60)	138 (28)	177 (28)
Elderly (>60)	212 (43)	263 (41)
External stimulus		
Drugs	208 (42)	324 (51)
Insect bite	172 (35)	179 (28)
Food	12 (2)	12 (2)
Unespecified	106 (21)	124 (19)

Anaphylaxis morbidity statistics (WHO Montpellier hospitalization database): cases/year, improvement of accuracy reaching 71.5% of agreement with the ICD-11.

#ICD11 **#CLASSIFICATION #HYPERSENSITIVITY** # ANAPHYLAXIS

ICD Implementation across WHO Member States ICD-11 Implementation Data not available Not Applicable

The use of ICD-11 had a clearer effect on accuracy, reaching 95% for definite anaphylaxis, and increased sensibility, with identification of 25% higher.

The ICD-11 "anaphylaxis" section endorsed by the WHO = recognition as a real condition, able to be properly diagnosed and managed

the ICD-11 new Immediate consequences classification:

anaphylaxis fatalities are currently perceived as rare, the reported number of anaphylaxis deaths may increase

Cases will be included in official mortality statistics, providing a global standard for comparability and, therefore, for decision-making and prevention.

ICD-11 is under implementation worldwide.

STALLERGENES GREER

and ation



Affiliations: University Hospital of Montpellier, Montpellier, and Sorbonne Universités, UPMC, UMR-S 1136, IPLESP, Equipe EPAR, 75013, Paris, France WHO Collaborating Centre on Scientific Classification Support (FRA 133)