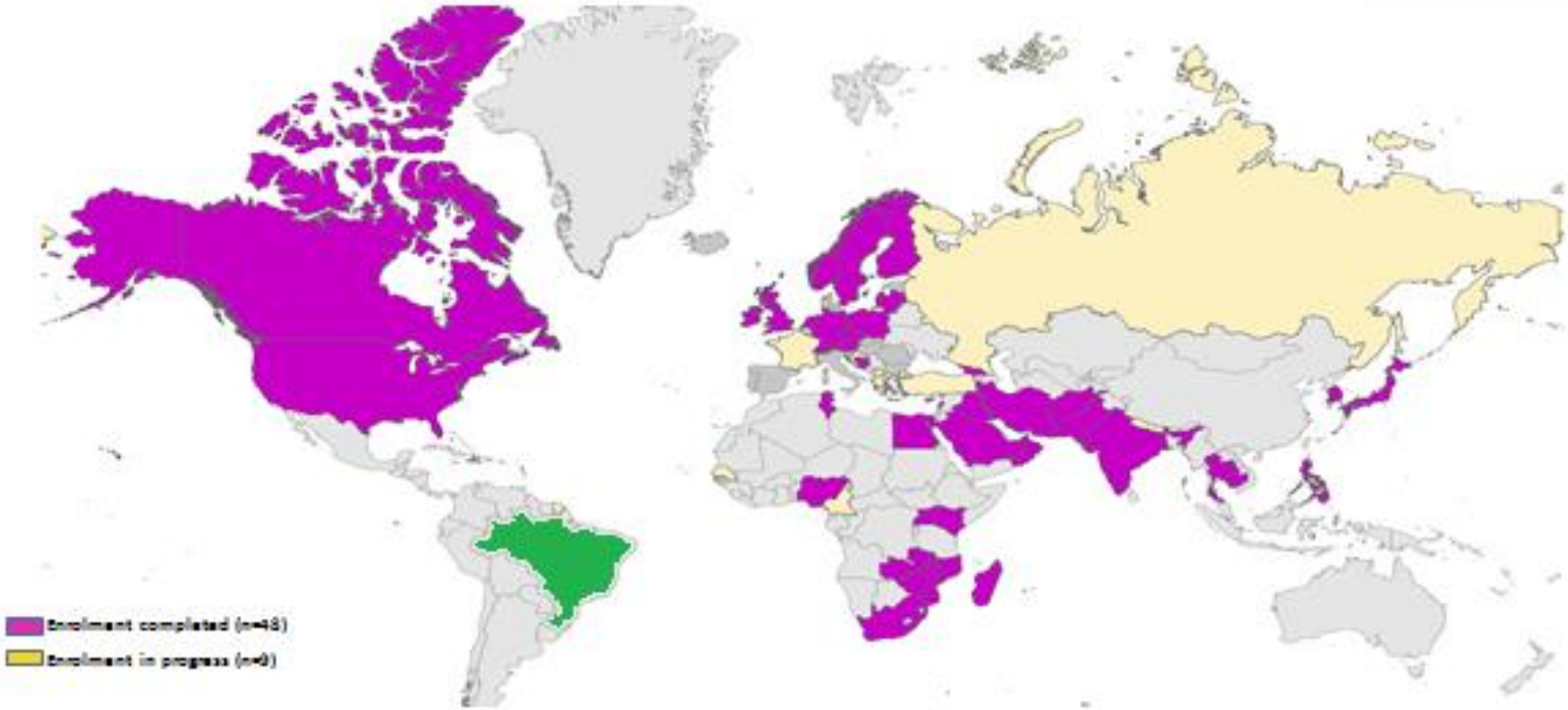
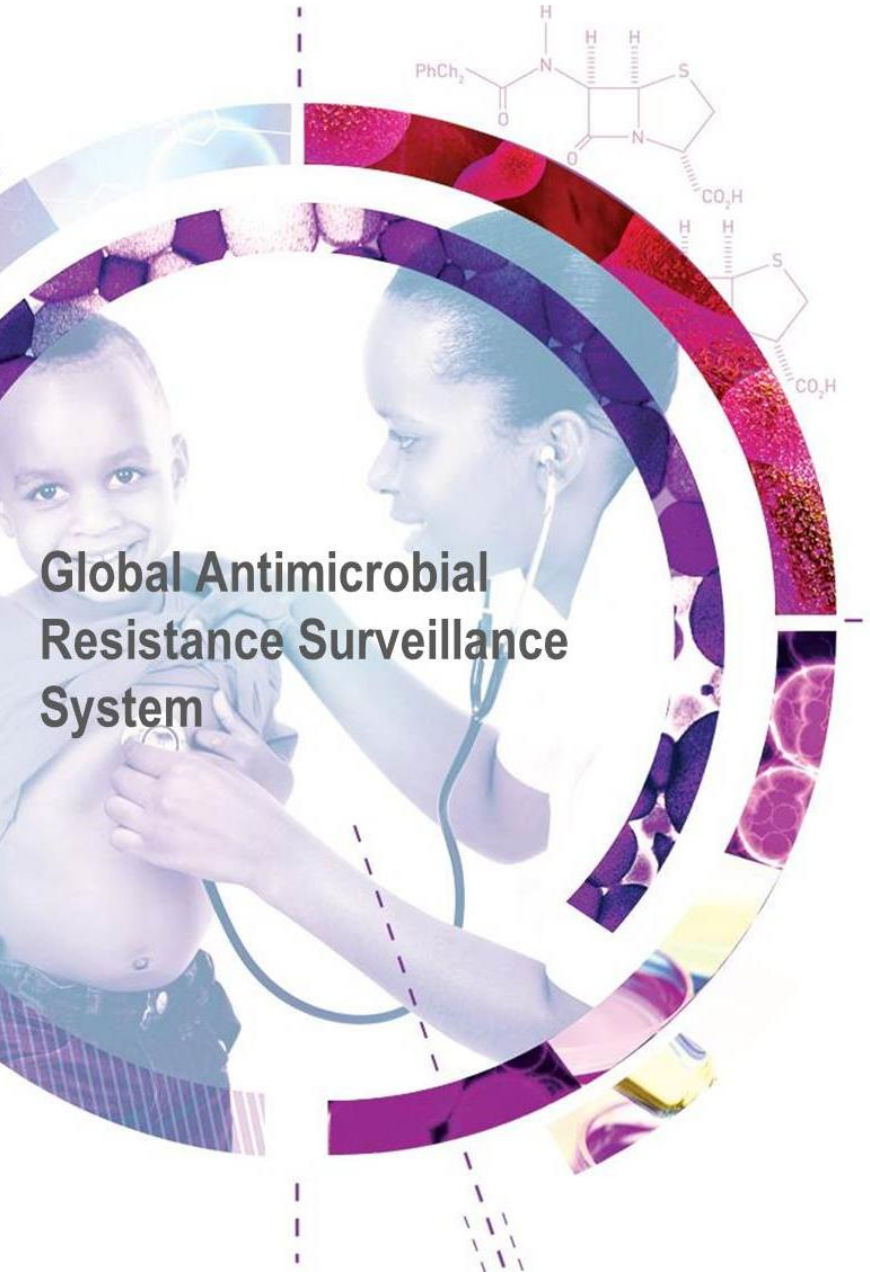
Países participando en GLASS

Hasta 17 de Noviembre 2017*



* Call for country enrolment issued on 21 March 2016



Gestión de la información Y análisis de datos en GLASS

Carmem Lucia Pessoa-Silva (pessoasilvacl@who.int)

Red Latino Americana de Vigilancia de Resistencia a los Antimicrobianos - ReLAVRA

Montevideo, 28-30 Nov 2017

Core components for national surveillance systems

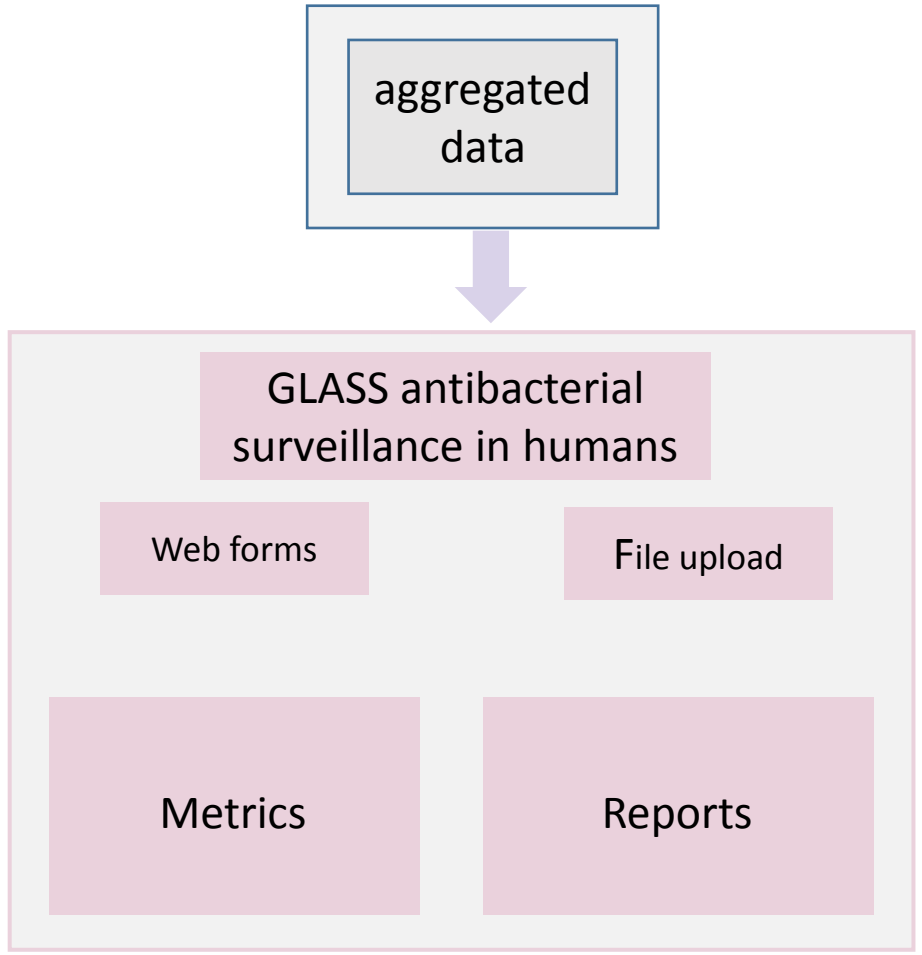
Surveillance sites

National reference laboratory (NRL)

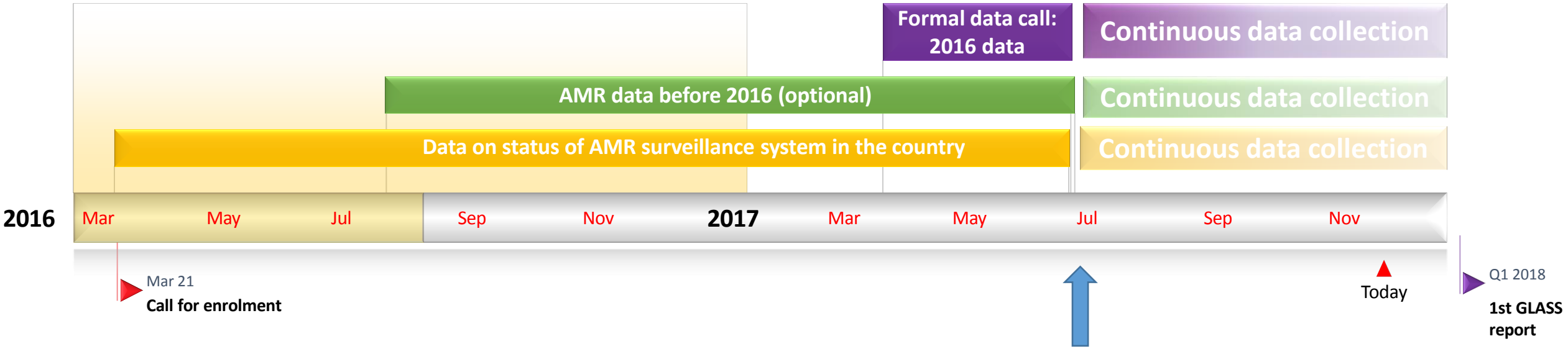
National Coordinating Centre to report to the national body in charge of strategies to contain AMR

GLASS IT platform

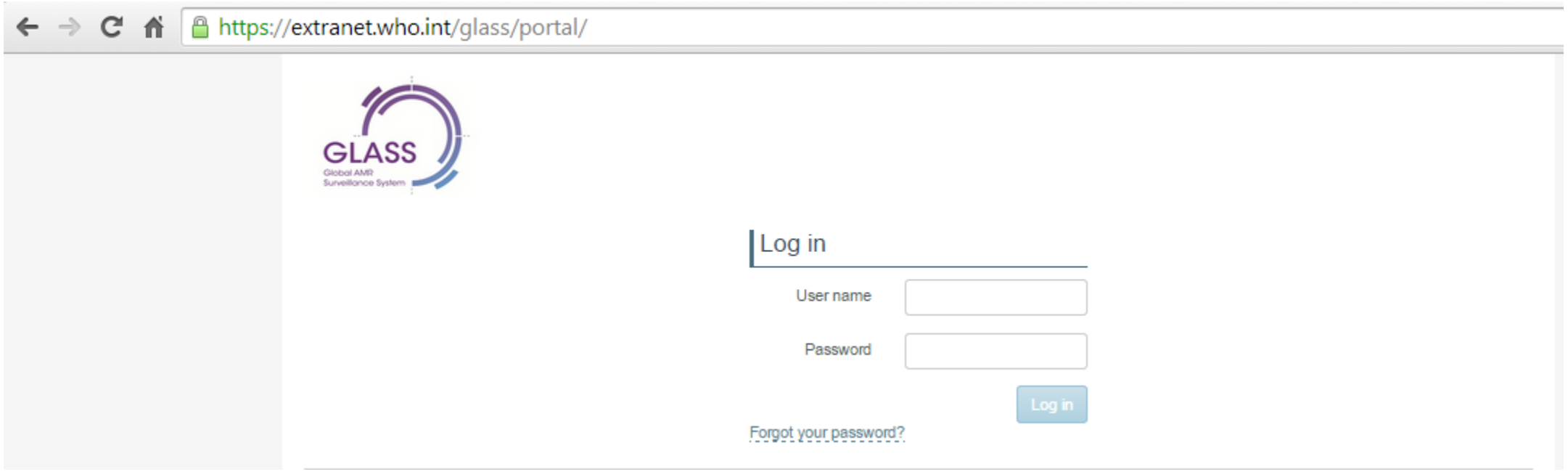
- To collect aggregated data throughout normalized files upload
- To produce reports and metrics based on collected data
- Hosted in WHO server



GLASS reporting timeline: 2016-2017



- Go to https://extranet.who.int/glass/portal
- Log in with user name and password



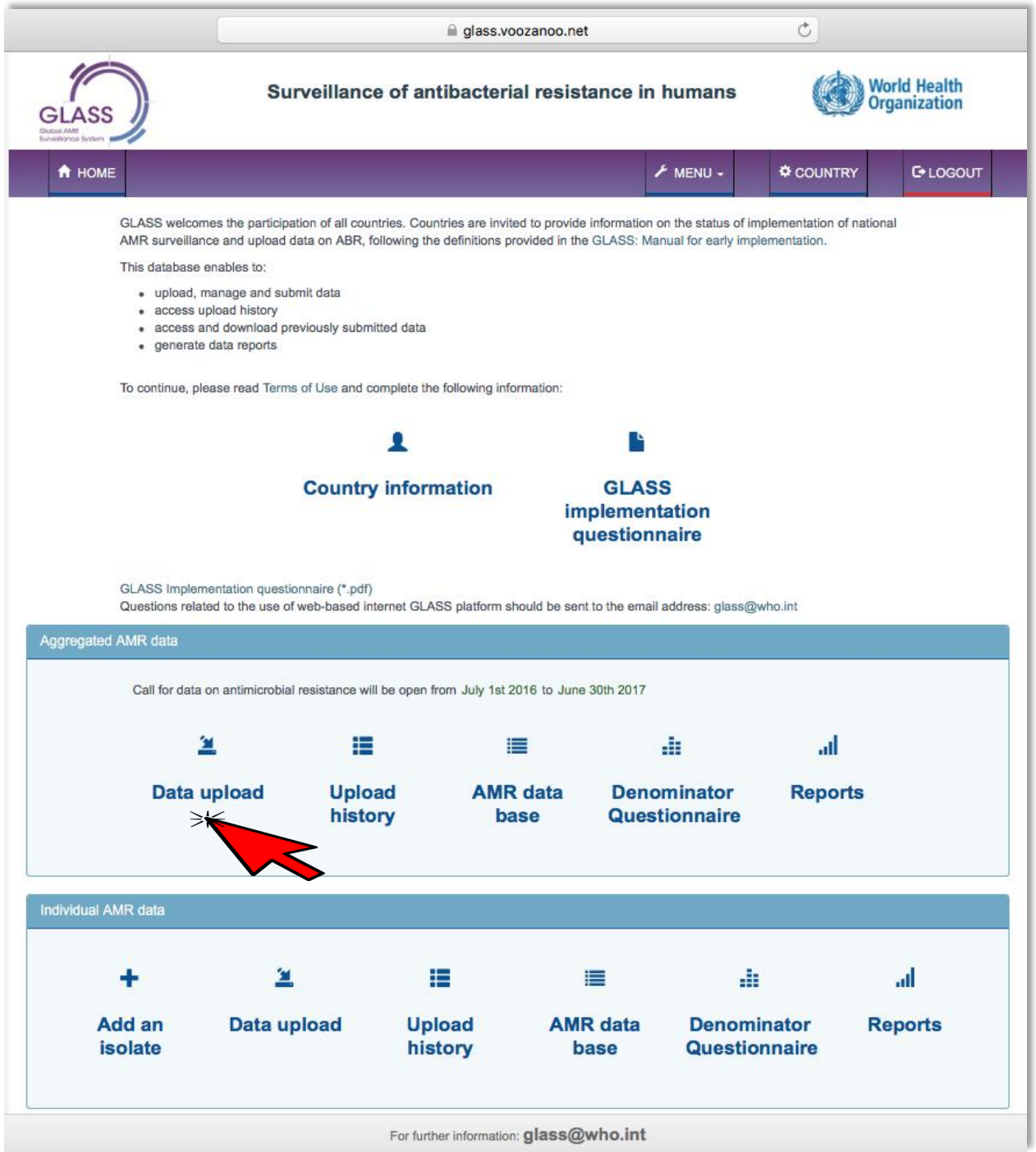
GLASSware: the GLASS IT platform

World Health Organization

GLASSware: the GLASS IT platform

2018

World Health Organization



Antibacterial resistance in humans

- GLASS focal points registration and submission of data on implementation of national AMR surveillance programmes
- Aggregated AMR data: upload, validation and analysis

Data submission

World Health Organization

GLASS
Global AMR Surveillance System

Health topics | Data | Media centre | Publications | Countries | Programmes | Governance

Antimicrobial resistance

- Antimicrobial resistance
- Global action plan on AMR
- Awareness and education
- Surveillance
- Infection, prevention and control
- Optimise use
- R&D and investment
- National action plans
- Resources and publications

GLASS documents and tools

GLASS enrolment and data management

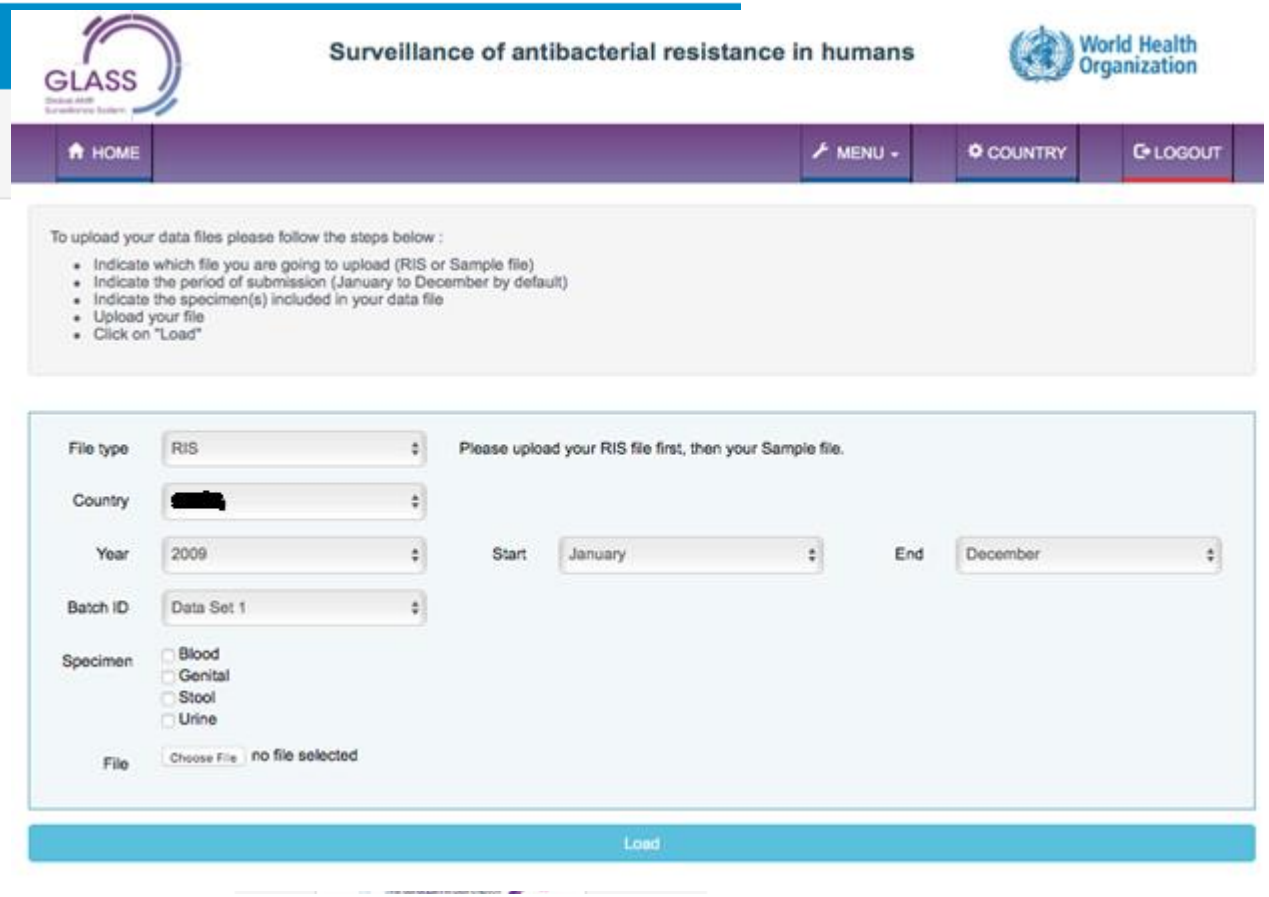
Guide to uploading aggregated antimicrobial resistance data
Download French PDF
pdf, 1.56Mb

Guide to preparing aggregated antimicrobial resistance data files
Download French PDF
pdf, 569kb

Guide to enrolment for antimicrobial resistance national focal points
Download French PDF
pdf, 582kb

Implementation questionnaire
Download French PDF
pdf, 149kb

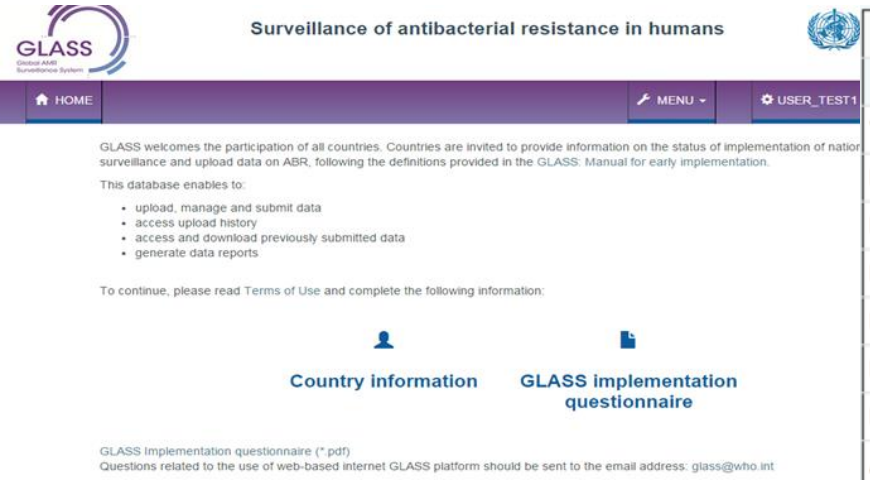
Guide to completing the GLASS implementation questionnaire



http://who.int/antimicrobial-resistance/global-action-plan/surveillance/glass-documents/en/

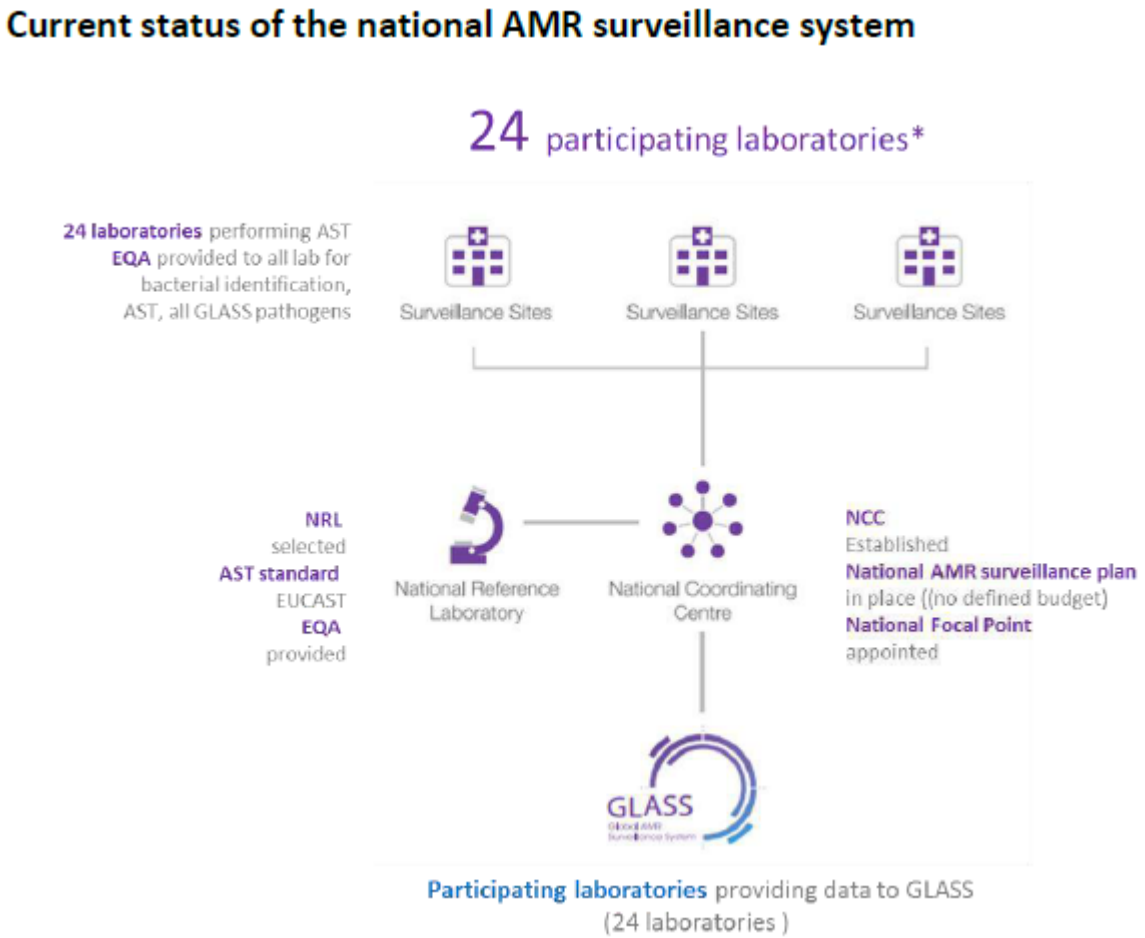
World Health Organization

Datos de implementación

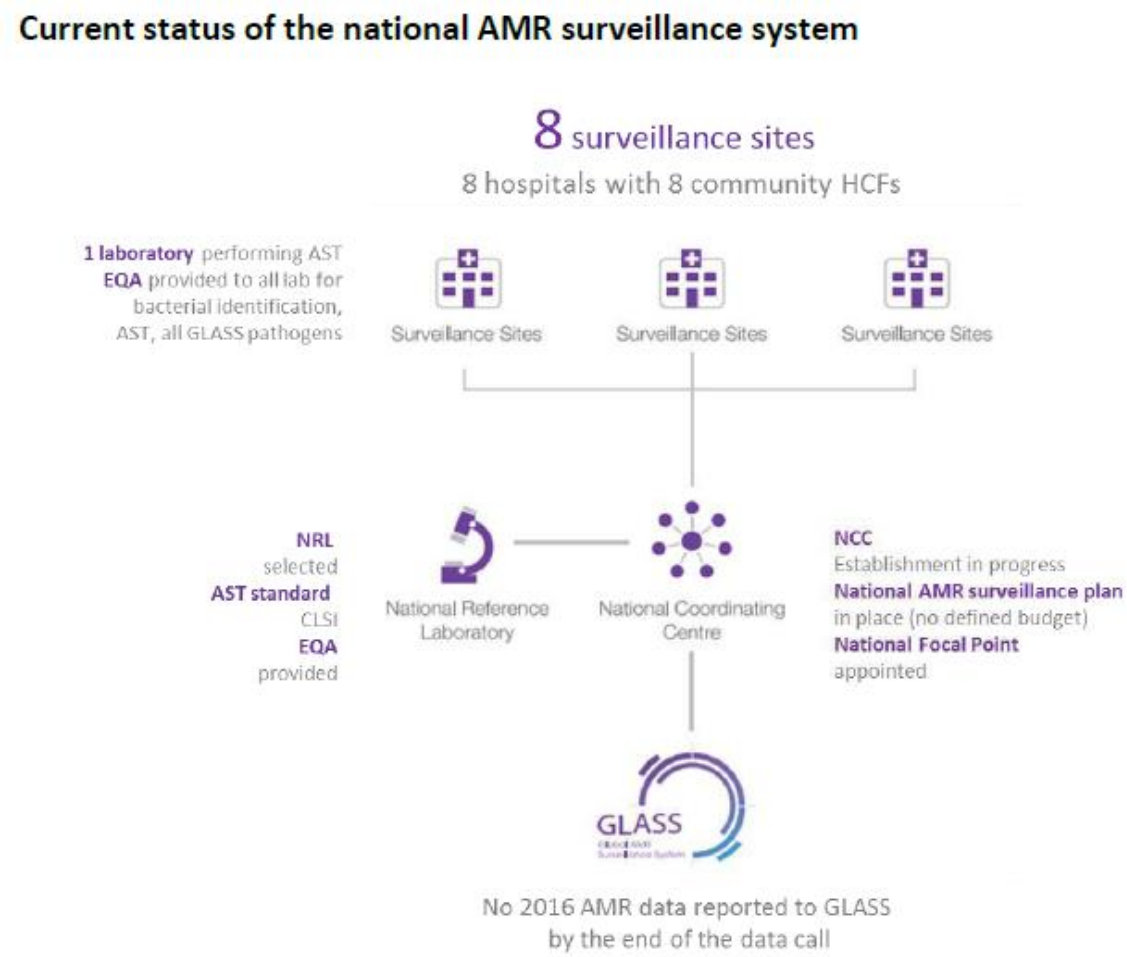


Region : WHO	Region, Country :	Batch Id : All, 2016
Year		2016
Population (thousands)		5503
National Coordination Centre has been established		Yes
Focal Point for GLASS has been assigned		Yes
National plans to implement and strengthen AMR surveillance		No
National Reference Laboratory has been designated to support national AMR surveillance		Yes
National Reference laboratory does participate in an external quality assurance scheme		Yes
AST standards applied in the country : EUCAST		Yes
AST standards applied in the country : CLSI		No
AMR surveillance standards and guidelines that incorporate GLASS standards available in the country		Yes
National programme organize and run external quality assurance for all laboratories participating in GLASS		No
External quality assurance cover both bacterial identification and AST		ND
All priority pathogens listed in the GLASS manual covered by the EQA		ND
Number of hospitals		ND
Number of outpatient facilities		ND
Number of reporting hospitals		ND
Number of reporting outpatient facilities		ND
Number of laboratories that perform AST and provide support to participating surveillance sites		24

Ejemplo: datos de implementación (1)

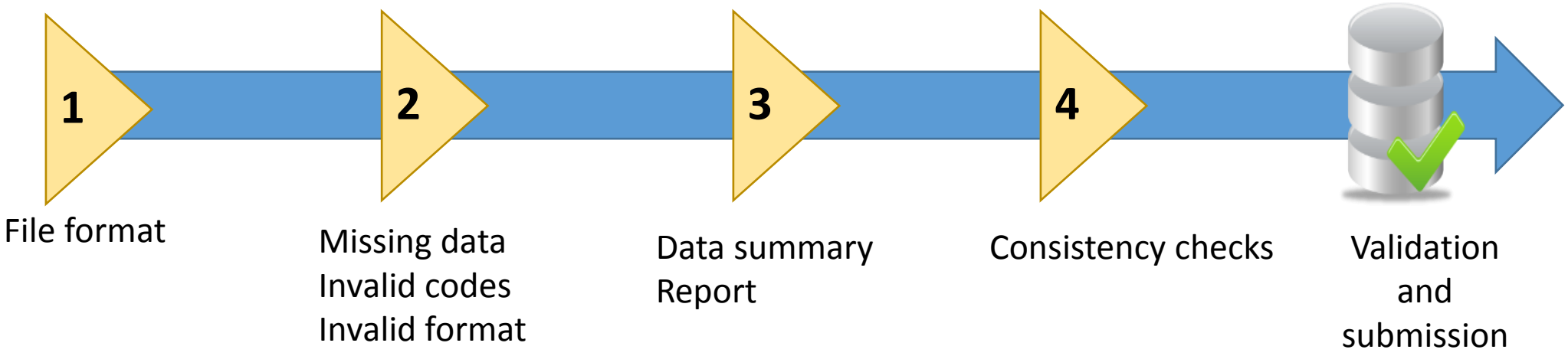


Ejemplo: datos de implementación (2)

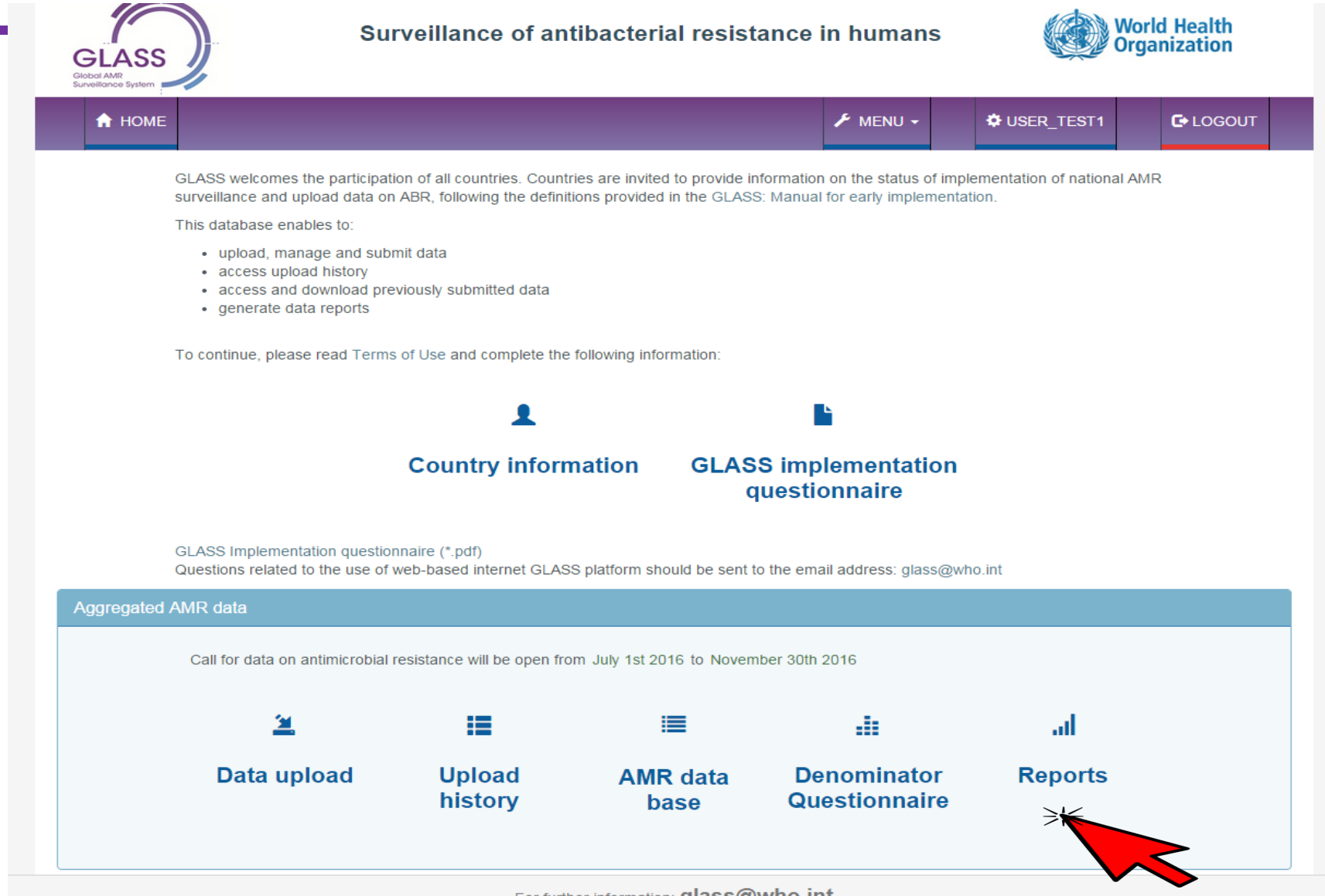


AMR Data validation

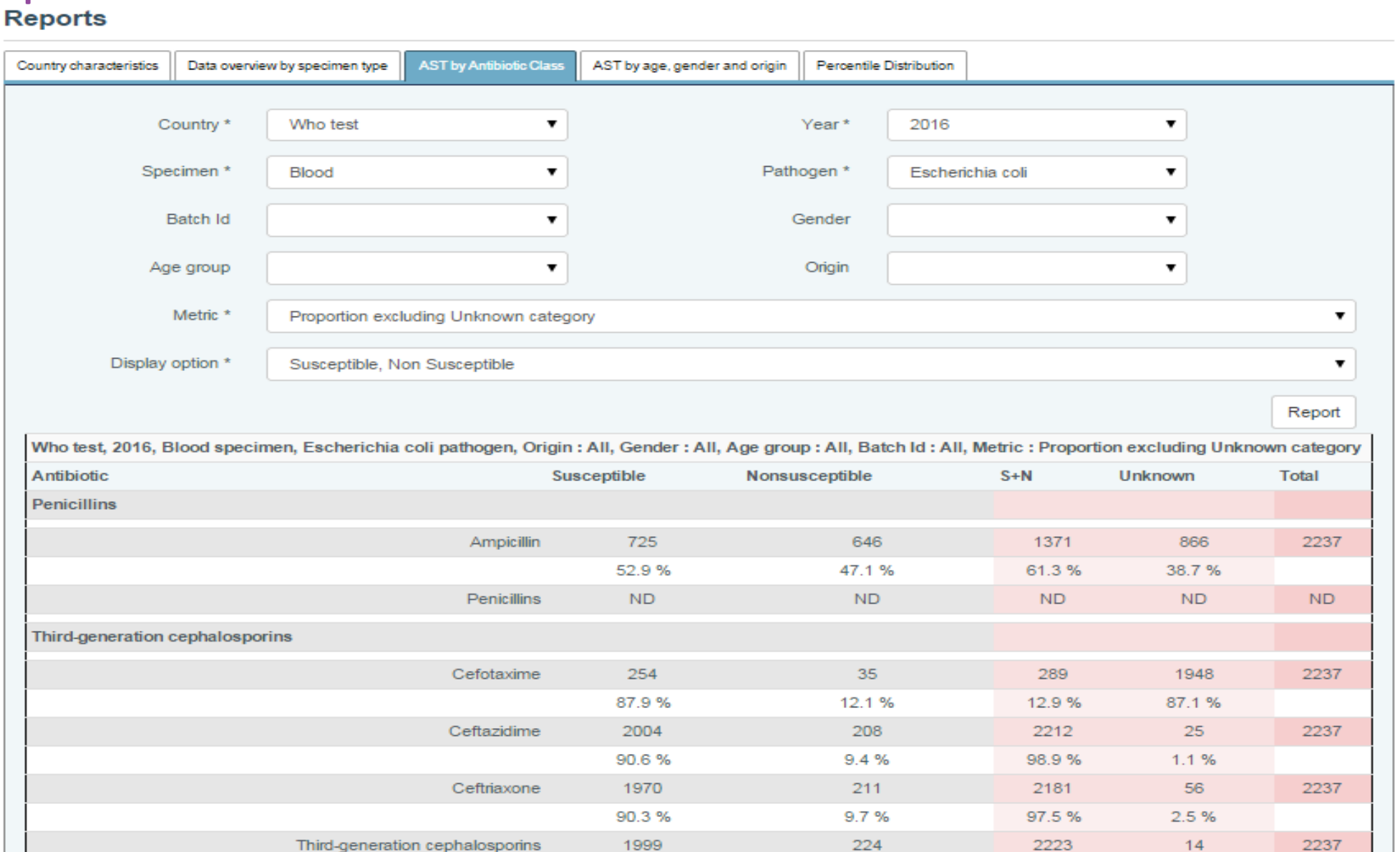
- Your upload will follow several data validation steps:
  - Does your file meets GLASS requirements ?
  - Does your file presents blocking errors or non-blocking errors ?
- At each steps the system gives you a feedback
- At the end you choose to validate or not your data submission



As soon as data uploaded, results are displayed in the reports



Specific pathogen resistance to reported antibiotics



Reports

Country characteristics | Data overview by specimen type | AST by Antibiotic Class | AST by age, gender and origin | Percentile Distribution

Country *	Who test	Year *	2016
Specimen *	Blood	Pathogen *	Escherichia coli
Batch Id		Gender	
Age group		Origin	
Metric *	Proportion excluding Unknown category		
Display option *	Susceptible, Non Susceptible		

Report

Who test, 2016, Blood specimen, Escherichia coli pathogen, Origin : All, Gender : All, Age group : All, Batch Id : All, Metric : Proportion excluding Unknown category

Antibiotic	Susceptible	Nonsusceptible	S+N	Unknown	Total
Penicillins					
Ampicillin	725	646	1371	866	2237
	52.9 %	47.1 %	61.3 %	38.7 %	
Penicillins	ND	ND	ND	ND	ND
Third-generation cephalosporins					
Cefotaxime	254	35	289	1948	2237
	87.9 %	12.1 %	12.9 %	87.1 %	
Ceftazidime	2004	208	2212	25	2237
	90.6 %	9.4 %	98.9 %	1.1 %	
Ceftriaxone	1970	211	2181	56	2237
	90.3 %	9.7 %	97.5 %	2.5 %	
Third-generation cephalosporins	1999	224	2223	14	2237

Stratification by age groups

GLASS
Global AMR Surveillance System

AGE GROUPS :					
Subtotal	254	35	289	1948	2237
	87.9 %	12.1 %	12.9 %	87.1 %	
<1	2	0	2	32	34
	100 %	0 %	5.9 %	94.1 %	
01-04	0	0	0	4	4
	NaN %	NaN %	0 %	100 %	
05-14	0	0	0	6	6
	NaN %	NaN %	0 %	100 %	
15-24	2	0	2	38	40
	100 %	0 %	5 %	95 %	
25-34	3	0	3	54	57
	100 %	0 %	5.3 %	94.7 %	
35-44	10	2	12	54	66
	83.3 %	16.7 %	18.2 %	81.8 %	
45-54	21	5	26	126	152
	80.8 %	19.2 %	17.1 %	82.9 %	
55-64	38	6	44	266	310
	86.4 %	13.7 %	14.2 %	85.8 %	
65-74	64	13	77	438	515
	83.1 %	16.9 %	15 %	85 %	
75-84	75	6	81	573	654
	92.6 %	7.4 %	12.4 %	87.6 %	
85+	39	3	42	357	399
	92.9 %	7.1 %	10.5 %	89.5 %	
Unknown	ND	ND	ND	ND	ND

World Health Organization

Rates per 1000 patients sampled if number of sampled patients is reported

GLASS
Global AMR Surveillance System

Who test, 2016, Genital specimen, Neisseria gonorrhoeae-Ciprofloxacin combination, Origin : All, Gender : All, Age group : All, Batch Id : All, Metric : Rates per 1000 patients with samples taken

Stratification	Susceptible	Nonsusceptible	S+N	Unknown	Total	Sampled patients
ORIGIN :						
Subtotal	32	292	324	6	330	7325
	4.4	39.9	44.2	0.8	45.1	
Hospital origin	ND	ND	ND	ND	ND	ND
Community origin	30	290	320	6	326	7015
	4.3	41.3	45.6	0.9	46.5	
Unknown	2	2	4	0	4	310
	6.5	6.5	12.9	0	12.9	
GENDER :						
Subtotal	32	292	324	6	330	7325
	4.4	39.9	44.2	0.8	45.1	
Male	28	240	268	4	272	5205
	5.4	46.1	51.5	0.8	52.3	
Female	4	50	54	2	56	1965
	2	25.5	27.5	1	28.5	
Other	ND	ND	ND	ND	ND	ND
Unknown	0	2	2	0	2	155
	0	12.9	12.9	0	12.9	

World Health Organization

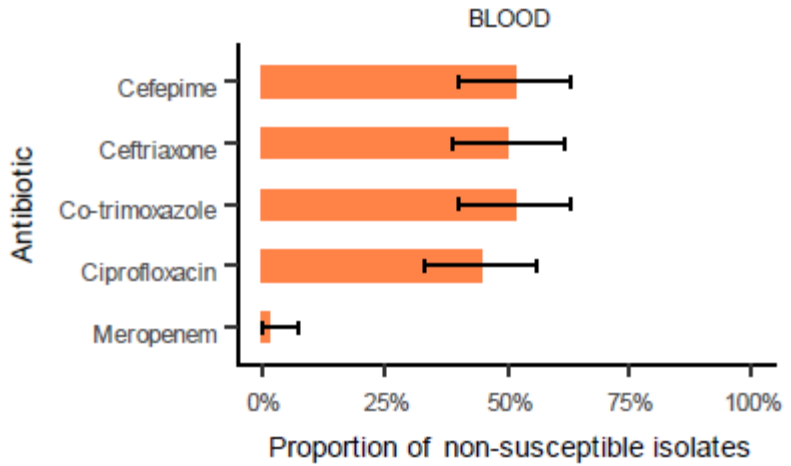
Technical support to countries

Flexibility to include ALL countries

➔ Based on the recommendations from countries

Ejemplo de resumen de datos RAM (1)

Specimen	Data on number of tested patients	Pathogen	AST results	Age	Gender	Infection origin
Blood	●	*Acinetobacter* spp.	●	●	●	●
		E. coli	●	●	●	●
		K. pneumoniae	●	●	●	●
		Salmonella spp.	●	●	●	●
		S.aureus	●	●	●	●
		S.pneumoniae	●	●	●	●
Urine	●	*E. coli*	●	●	●	●
		K. pneumoniae	●	●	●	●
Stool	●	*Salmonella* spp.	●	●	●	●
		Shigella spp.	●	●	●	●
Genital	●	*N. gonorrhoea*	●	●	●	●



Data overview – collection between January and December 2016

Specimen	Number of tested patients			Pathogens	Number of patients with positive samples		
	Community origin	Hospital origin	Unknown origin		Community origin	Hospital origin	Unknown origin
Blood	-	-	-	*Acinetobacter* spp.	-	-	-
				E. coli	-	-	72
				K. pneumoniae	-	-	-
				Salmonella spp.	-	-	-
				S. aureus	-	-	-
				S. pneumoniae	-	-	-
Urine	-	-	-	*E. coli*	-	-	-
				K. pneumoniae	-	-	-
Stool	-	-	-	*Salmonella* spp.	-	-	-
				Shigella spp.	-	-	-
Genital	-	-	-	*N. gonorrhoea*	-	-	-

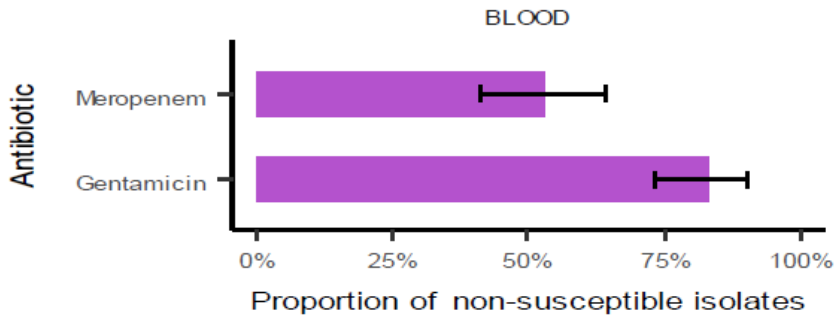
Ejemplo de resumen de datos RAM (2)

Specimen	Data on number of tested patients	Pathogen	AST results	Age	Gender	Infection origin
Blood	●	*Acinetobacter* spp.	●	●	●	●
		E. coli	●	●	●	●
		K. pneumoniae	●	●	●	●
		Salmonella spp.	●	●	●	●
		S.aureus	●	●	●	●
		S.pneumoniae	●	●	●	●
Urine	●	*E. coli*	●	●	●	●
		K. pneumoniae	●	●	●	●
Stool	●	*Salmonella* spp.	●	●	●	●
		Shigella spp.	●	●	●	●
Genital	●	*N. gonorrhoea*	●	●	●	●

Data overview – collection between January and December 2016

Specimen	Number of tested patients			Pathogens	Number of patients with positive samples		
	Community origin	Hospital origin	Unknown origin		Community origin	Hospital origin	Unknown origin
Blood	-	-	-	*Acinetobacter* spp.	-	-	72
				E. coli	-	-	405
				K. pneumoniae	-	-	126
				Salmonella spp.	-	-	122
				S. aureus	-	-	245
				S. pneumoniae	-	-	463
Urine	-	-	-	*E. coli*	-	-	252
				K. pneumoniae	-	-	47
Stool	-	-	-	*Salmonella* spp.	-	-	83
				Shigella spp.	-	-	110
Genital	-	-	-	*N. gonorrhoea*	-	-	413

***Acinetobacter* spp.** (n=72)

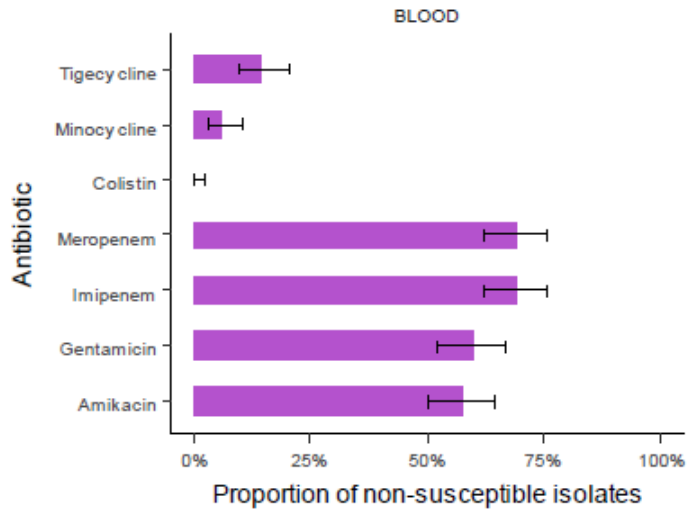


Ejemplo de resumen de datos RAM (3)

Specimen	Number of tested patients	Pathogen	AST results	Age	Gender	Infection origin
Blood		*A. baumannii*				
		E. coli				
		K. pneumoniae				
		Salmonella spp.				
		S.aureus				
		S.pneumoniae				
Urine		*E. coli*				
		K. pneumoniae				
Stool		*Salmonella* spp.				
		Shigella spp.*				
Genital		*N. gonorrhoea*				

* Data collected by the national system, but no positive samples were obtained.

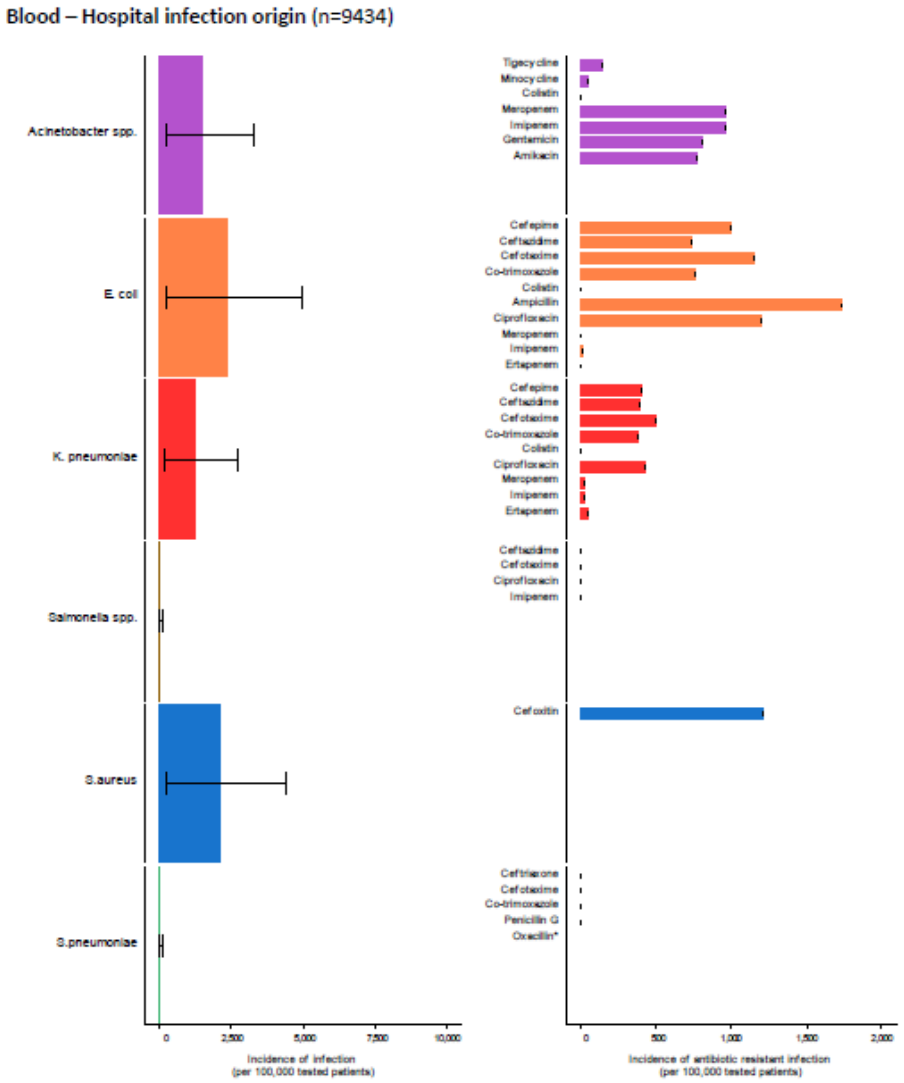
***Acinetobacter* spp.** (n=169)

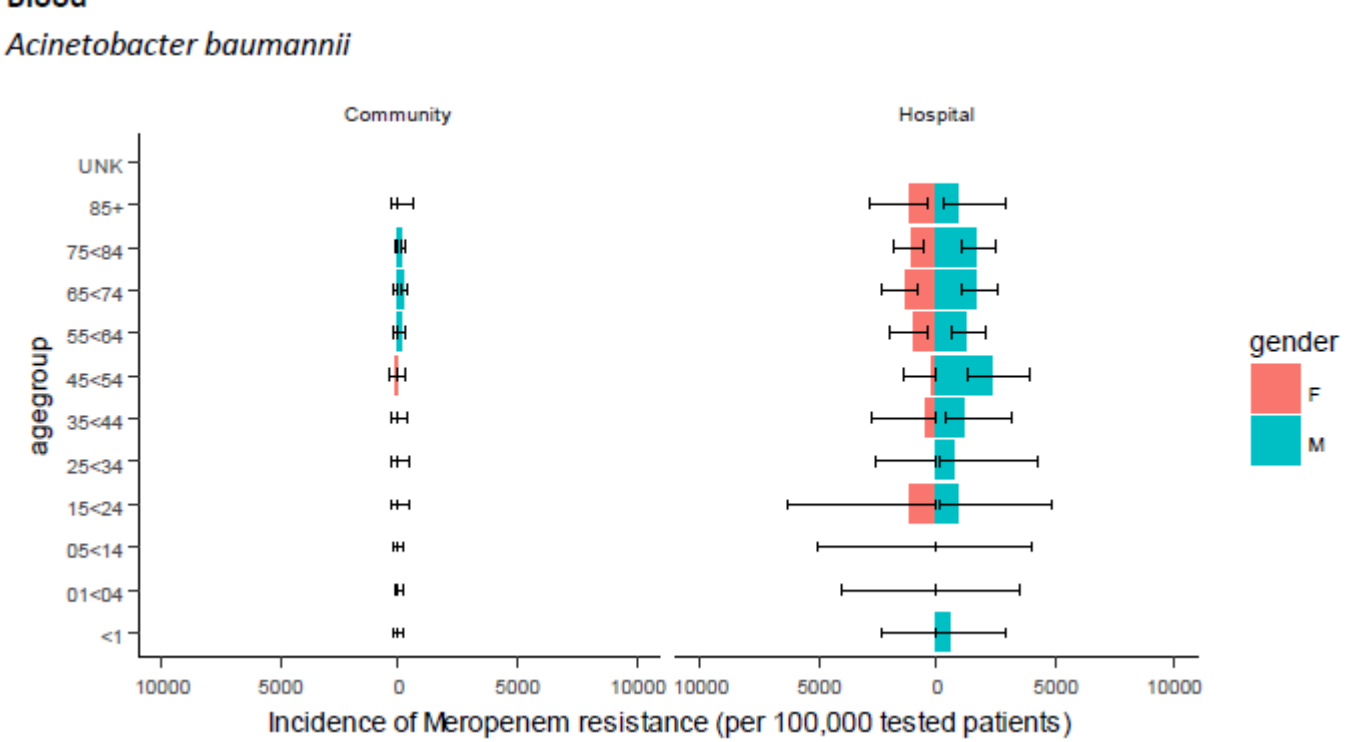


Data overview – collection between January and June 2016

Specimen	Number of tested patients			Pathogens	Number of patients with positive samples		
	Community origin	Hospital origin	Unknown origin		Community origin	Hospital origin	Unknown origin
Blood	38938	9434	-	*Acinetobacter* spp.	27	142	-
			-	*E. coli*	885	219	-
			-	*K. pneumoniae*	306	116	-
			-	*Salmonella* spp.	32	2	-
			-	*S. aureus*	195	195	-
			-	*S. pneumoniae*	11	3	-
Urine	31426	8988	-	*E. coli*	3637	799	-
			-	*K. pneumoniae*	491	321	-
Stool	4777	4283	-	*Salmonella* spp.	65	6	-
			-	*Shigella* spp.	-	-	-
Genital	-	-	-	*N. gonorrhoea*	-	-	-

Cont. ejemplo de resumen de datos (2)





Interpretación de los resultados

= dependiente de las prácticas de utilización de métodos diagnósticos

GLASS
Global AMR Surveillance System

Proof of principle study to improve sampling habits

Nienke van de Sande

Technical officer AMR, WHO Regional office for Europe, Denmark

World Health Organization Europe

PoP has the goal to improve

Use of **microbiological diagnostics** to identify pathogens and guide therapeutic decisions.

Appropriate selection & collection of **specimens**

Accurate and timely **testing & reporting** of results

Responsible & informed **prescribing** of antimicrobials

World Health Organization Europe

World Health Organization

Mejorar el uso de métodos diagnósticos = ayuda a la vigilancia!!

GLASS
Global AMR Surveillance System

Proof of principle study to improve sampling habits

Nienke van de Sande

Technical officer AMR, WHO Regional office for Europe, Denmark

World Health Organization Europe

PoP has the goal to improve

Use of **microbiological diagnostics** to identify pathogens and guide therapeutic decisions.	Appropriate selection & collection of **specimens**
Accurate and timely **testing & reporting** of results	Responsible & informed **prescribing** of antimicrobials

World Health Organization Europe

GLASS

Diagnostic stewardship

A guide to implementation in antimicrobial resistance surveillance sites

World Health Organization

World Health Organization

Access to GLASS data

- IT data platform hosted in WHO

- The reports with specific country data are visible for GLASS users with passwords:
  - only for your country users
  - for the staff of specific WHO region
  - for the WHO HQ staff

Concluding remarks

- Need for good diagnostic practices for improving quality of data

- GLASS as a global tool for
  - data sharing
  - Data analysis & reporting

- Participation in GLASS
  - Share data on common indicators
  - Shape and inform future GLASS development

Gracias

glass@who.int