Escuela de Primavera SEFH

PROA EN CENTROS SOCIOSANITARIOS (ATENCIÓN INTERMEDIA)

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Retos en el paciente del futuro: EL PACIENTE CRÓNICO

PROGRAMA DE OPTIMIZACIÓN DE ANTIBIÓTICOS EN CENTROS SOCIOSANITARIOS

ENVEJECIMIENTO

ENTORNOS ESPECÍFICOS

RESISTENCIAS

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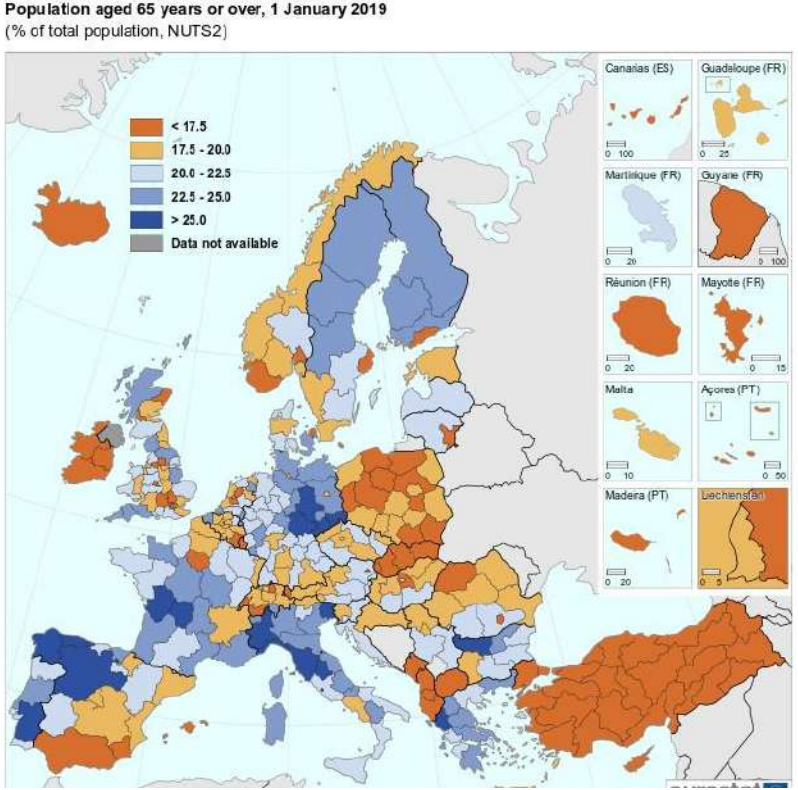
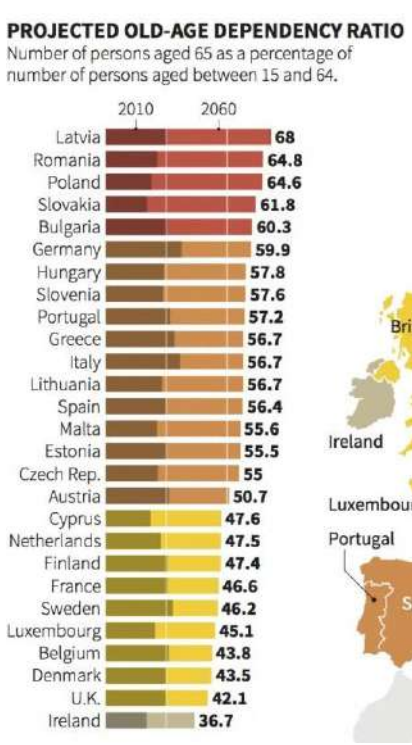
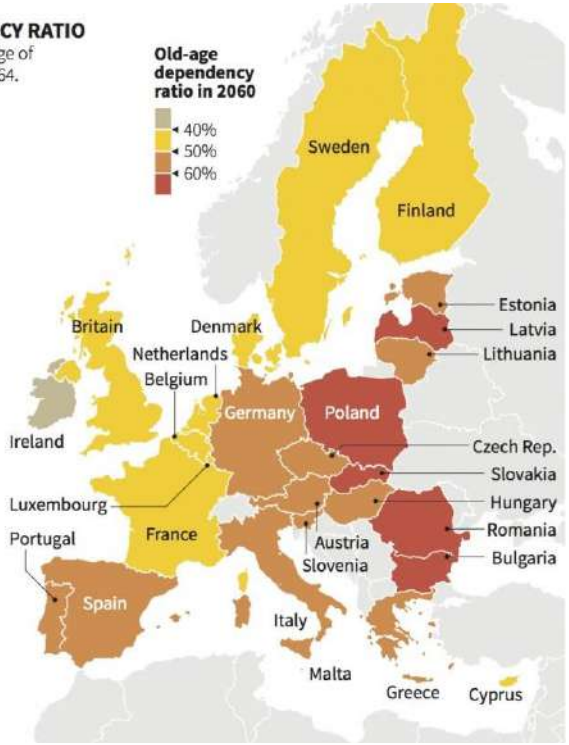
#CronosSomosTodos

ENVEJECIMIENTO POBLACIONAL







- **ESCENARIO DE ELEVADO % DE POBLACIÓN ENVEJECIDA**
- **ESTA POBLACIÓN SERÁ PROPORCIONALMENTE MÁS 'ENFERMA' EN ESPAÑA QUE EN OTROS PAÍSES EUROPEOS**
- **ESCENARIO SOCIAL Y SANITARIO COMPLEJO**

Zueras P et al. La esperanza de vida libre de enfermedad no aumenta en España. Perspectivas demográficas 2021. DOI: 10.46710/ced.pd.esp.22.

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ATENCIÓN INTERMEDIA

'servicio socio-sanitario ofertado a los pacientes (generalmente mayores) después de una estancia hospitalaria (atención aguda) cuando existe riesgo de reingreso, ayudando a recuperar la independencia funcional y evitando el traslado a un entorno residencial (hasta que realmente lo necesite)'

NHS (2021)

ATENCIÓN INTERMEDIA

- Hospitales especializados en el paciente geriátrico y frágil (unidades de convalecencia, subagudos, curas paliativas y larga estancia)
- También unidades de Hospitalización Domiciliaria, Soporte Paliativo domiciliario y Hospital de Dia
- Aproximadamente 70 centros y 4400 plazas (camas) hospitalarias

Observatorio del Sistema de Salud de Cataluña. Central de Resultados. Ámbito Sociosanitario. 2017

The post-antibiotic era is here

Imagine a world where routine surgery or chemotherapy is considered too dangerous because there are no drugs to prevent or treat bacterial infections. Unless researchers develop new antibiotics and therapeutics, the decimation of modern medicine will soon become a reality. Scientists have long recognized that much stronger incentives for research and development are needed to avoid this scenario. Yet, the rise of "superbugs" has continued, making a pandemic of antibiotic resistance a major threat to global health.

One could blame slowed action against antimicrobial resistance (AMR) on an upstaging by COVID-19. Health and industry sectors deferred prepandemic AMR work to focus on tracking and preventing severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) transmission. Worldwide, scientists pivoted toward SARS-CoV-2 research. This "all hands on deck" response was prudent but likely affected the already lagging progress on battling AMR. What about efforts before COVID-19?

> "...drug-resistant infections could, annually, kill 10 million people worldwide by 2050..."

Prepandemic, experts noted that drug-resistant infections could, annually, kill 10 million people worldwide by 2050, and by 2030, AMR could force up to 24 million people into extreme poverty. Reports from the United Nations, the World Health Organization, and the UK and US governments promoted renewed public health and research programs, including targeted funding through the US National Institutes of Health and the Biomedical Advanced Research and Development Authority, to develop new drugs. Sadly, according to a March 2021 report by The Pew Charitable Trusts, there are only 43 new antibiotics in development. Of these, 13 are in phase 3 clinical trials, and only about half of these might be approved.

It's no secret that the major problem is the lack of private-sector interest in bringing novel antimicrobial therapies through development. The war against AMR requires innovation, which is costly. It typically takes 10 to 15 years to develop an antibiotic through regulatory approval. According to the Pew report, among the 38 companies working on AMR, only two rank among the top 50 pharmaceutical companies (by sales). And only about one in four developments represents a novel drug class or a mechanism of action. We need new pharmaceutical targets to combat microbial virulence, new methods to inhibit the genetic transfer of antibiotic resistance between bacteria, new drugs that bolster host immunity against AMR, and microbiota-based therapies. To better track AMR, next-generation diagnostics are needed that use whole-genome and metagenomic sequencing and molecular techniques to detect AMR organisms in humans, animals, and the environment.

Prior to 2020, the United States started paying attention to market-place incentives that would rekindle private investment. In 2013, the US Centers for Disease Control and Prevention (CDC) released its first Antibiotics Resistance Threats report, which prompted a National Action Plan for Combating Antibiotic-Resistant Bacteria in 2015. Fortunately, last October, the strategy was renewed for 5 years, directing federal agencies to spur new drug development. Also, the Pioneering Antimicrobial Subscriptions to End Upsurging Resistance (PASTEUR) Act was reintroduced in Congress last month. If the bipartisan bill passes, it will support a funding model that is not linked to sales, among other economic incentives. Although the White House's fiscal year 2022 budget plan leaves gaps in resources to address AMR, increases in health security budgets could be directed at incentivizing drug development. Given that the CDC's 2019 Antibiotic Resistance Threats report indicated that 2.8 million Americans acquire infections caused by AMR bacteria each year (with more than 35,000 resulting deaths), the government must do more to encourage private-sector interest.

COVID-19 has shown that it is possible to create robust public-private partnerships across research, industry, and public health that accelerate research and clinical trials and spur proactive regulation in the context of a global public health threat. Collaborative action is equally necessary to battle AMR. The Combating Antibiotic-Resistant Bacteria Biopharmaceutical Accelerator, a global public-private partnership established in 2016, committed $500 million, through 2022, to support the development of new antibiotics and rapid diagnostics to tackle AMR. We need many more such creative partnerships.

The scientific community should leverage lessons learned from COVID-19 to unite academia, industry, government, and policy-makers toward preserving the benefits of modern medicine. Continued procrastination will only lead to countless lives lost to AMR.

–Jennie H. Kwon and William G. Powderly

Global burden of bacterial antimicrobial resistance in 2019: a systematic analysis

Antimicrobial Resistance Collaborators*

Summary

Background Antimicrobial resistance (AMR) poses a major threat to human health around the world. Previous publications have estimated the effect of AMR on incidence, deaths, hospital length of stay, and health-care costs for specific pathogen–drug combinations in select locations. To our knowledge, this study presents the most comprehensive estimates of AMR burden to date.

Methods We estimated deaths and disability-adjusted life-years (DALYs) attributable to and associated with bacterial AMR for 23 pathogens and 88 pathogen–drug combinations in 204 countries and territories in 2019. We obtained data from systematic literature reviews, hospital systems, surveillance systems, and other sources, covering 471 million individual records or isolates and 7585 study-location-years. We used predictive statistical modelling to produce estimates of AMR burden for all locations, including for locations with no data. Our approach can be divided into five broad components: number of deaths where infection played a role, proportion of infectious deaths attributable to a given infectious syndrome, proportion of infectious syndrome deaths attributable to a given pathogen, the percentage of a given pathogen resistant to an antibiotic of interest, and the excess risk of death or duration of an infection associated with this resistance. Using these components, we estimated disease burden based on two counterfactuals: deaths attributable to AMR (based on an alternative scenario in which all drug-resistant infections were replaced by drug-susceptible infections), and deaths associated with AMR (based on an alternative scenario in which all drug-resistant infections were replaced by no infection). We generated 95% uncertainty intervals (UIs) for final estimates as the 25th and 975th ordered values across 1000 posterior draws, and models were cross-validated for out-of-sample predictive validity. We present final estimates aggregated to the global and regional level.

Findings On the basis of our predictive statistical models, there were an estimated 4·95 million (3·62–6·57) deaths associated with bacterial AMR in 2019, including 1·27 million (95% UI 0·911–1·71) deaths attributable to bacterial AMR. At the regional level, we estimated the all-age death rate attributable to resistance to be highest in western sub-Saharan Africa, at 27·3 deaths per 100 000 (20·9–35·3), and lowest in Australasia, at 6·5 deaths (4·3–9·4) per 100 000. Lower respiratory infections accounted for more than 1·5 million deaths associated with resistance in 2019, making it the most burdensome infectious syndrome. The six leading pathogens for deaths associated with resistance (*Escherichia coli*, followed by *Staphylococcus aureus*, *Klebsiella pneumoniae*, *Streptococcus pneumoniae*, *Acinetobacter baumannii*, and *Pseudomonas aeruginosa*) were responsible for 929 000 (660 000–1 270 000) deaths attributable to AMR and 3·57 million (2·62–4·78) deaths associated with AMR in 2019. One pathogen–drug combination, methicillin-resistant *S aureus*, caused more than 100 000 deaths attributable to AMR in 2019, while six more each caused 50 000–100 000 deaths: multidrug-resistant excluding extensively drug-resistant tuberculosis, third-generation cephalosporin-resistant *E coli*, carbapenem-resistant *A baumannii*, fluoroquinolone-resistant *E coli*, carbapenem-resistant *K pneumoniae*, and third-generation cephalosporin-resistant *K pneumoniae*.

Interpretation To our knowledge, this study provides the first comprehensive assessment of the global burden of AMR, as well as an evaluation of the availability of data. AMR is a leading cause of death around the world, with the highest burdens in low-resource settings. Understanding the burden of AMR and the leading pathogen–drug combinations contributing to it is crucial to making informed and location-specific policy decisions, particularly about infection prevention and control programmes, access to essential antibiotics, and research and development of new vaccines and antibiotics. There are serious data gaps in many low-income settings, emphasising the need to expand microbiology laboratory capacity and data collection systems to improve our understanding of this important human health threat.

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*Collaborators are listed at the end of the paper

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Murray CJ et al. Lancet 2022; 399(10325): 629-655.
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PROGRAMA PROA-VINCAT

(Programa Optimización Antibióticos – Vigilancia Infecciones Nosocomiales de Cataluña)

Enferm Infecc Microbiol Clin 2017;35(8):503–508

Enfermedades Infecciosas y Microbiología Clínica
www.elsevier.es/eimc

Brief report

Prevalence of healthcare-associated infections in long-term care facilities in Catalonia. VINCat Program☆

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ABSTRACT

Introduction: Long-term care facilities (LTCFs) have become receptors of patients with a high risk of healthcare-associated infections (HAIs).
Objective: To determine the prevalence of HAIs in LTCFs.
Method: During the period 2011-2014 2 annual prevalence studies were performed according to Healthcare-associated infections in long-term-care facilities (HALT) study definitions and methodology.
Results: A total of 28,160 patients were included in the study. The overall prevalence rate of HAIs was 10.2%. Subacute units and palliative care units showed the highest rates, 22.3% and 18.7%, respectively. Main infections were respiratory tract infection (35.8%) and urinary tract infection (35.8%).
Conclusion: These results were higher than other similar experiences, a fact that suggests the need to extend the specific strategies and programs to LTCFs, and ensuring a sufficient number of specialised staff in infection control.

Prevalencia de infección relacionada con la asistencia sanitaria en centros sanitarios de cuidados prolongados de Cataluña. Programa de Vigilancia de la Infección Nosocomial en Cataluña (VINCat)

Palabras clave:
Infección relacionada con la asistencia sanitaria
Centros sanitarios de cuidados prolongados
Prevalencia

RESUMEN

Introducción: Los centros sanitarios de cuidados prolongados (CSCP) se han convertido en receptores de enfermos con un alto riesgo de aparición de infecciones relacionadas con la asistencia sanitaria (IRAS).
Objetivo: Determinar la prevalencia de las IRAS en los CSCP de nuestro medio.
Método: Durante el periodo 2011-2014 se realizaron 2 estudios anuales de prevalencia siguiendo las definiciones y metodología del estudio *Healthcare-associated infections in long-term care facilities* (HALT).
Resultados: La muestra final fue de 28.160 pacientes. La prevalencia de IRAS en los datos agregados fue de 10,2%. Las unidades de subagudos, con un 22,3%, y paliativos, con un 18,7%, fueron las que presentaron un mayor porcentaje de infecciones. Las infecciones más frecuentes fueron las respiratorias (35,8%) y las urinarias (35,8%).

DOI of original article: http://dx.doi.org/10.1016/j.eimc.2015.11.013
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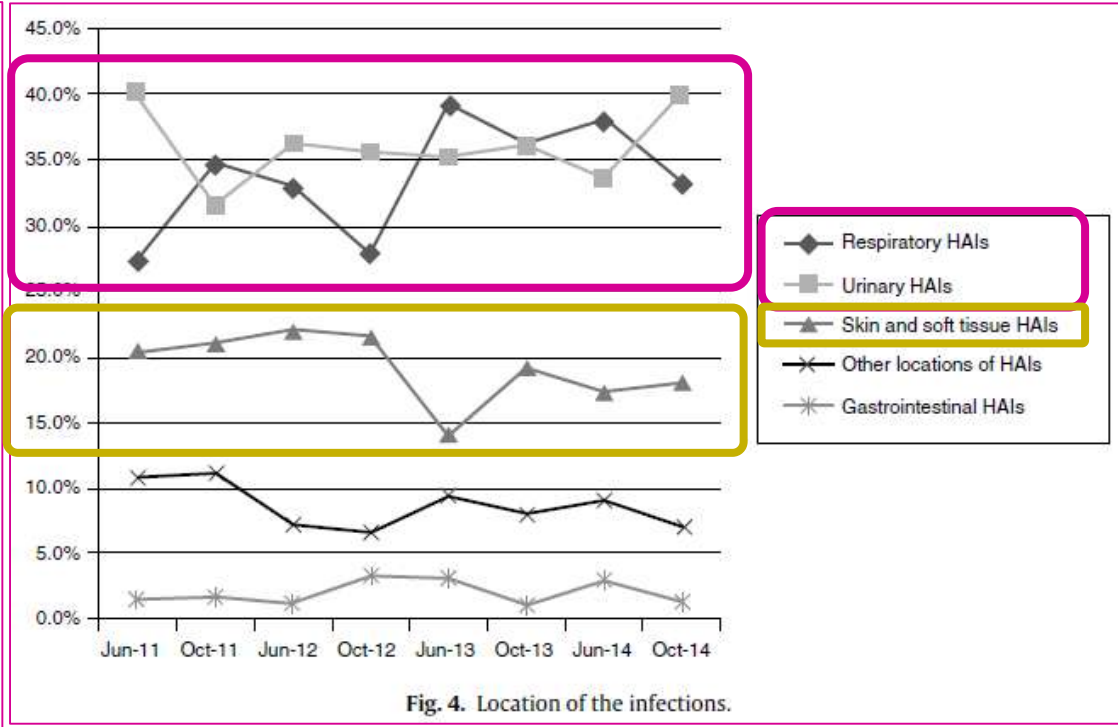

Fig. 4. Location of the infections.

Serrano M et al. Enf Infec Microb Clin 2017; 35(8): 503-8
DOI: 10.1016/j.eimce.2017.08.004

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OBJETIVOS

- PRINCIPAL: mejora clínica de los pacientes
- SECUNDARIOS: reducir resistencias + reducir efectos adversos + reducir costes

¿CÓMO?

- Creación de equipos MULTIDISCIPLINARES PROA (médico + farmacéutico + enfermera ± microbiólogo)
- Monitorización e interpretación de INDICADORES
- Contraprestación económica

Table 1. Components of the intervention of each study.

	Education strategies	Clinical practice guidelines	Local consensus processes	Audit and feedback	Patient-mediated interventions	Tailored interventions	Continuous quality improvement	Care pathways	Infectious disease team	ICT	Total
Loeb *et al.*, 2005	■	■									2
Monette *et al.*, 2007	■	■	■	■							4
Pettersson *et al.*, 2011	■	■				■					3
Linnebur *et al.*, 2011	■	■						■			3
Zimmerman *et al.*, 2014	■	■		■	■	■	■	■			7
Fleet *et al.*, 2014	■	■						■			3
Van Buul *et al.*, 2015	■	■				■					3
McMaughan *et al.*, 2016	■	■	■								3
Pasay *et al.*, 2019	■	■		■		■	■		■		6
Nace *et al.*, 2020	■	■		■					■	■	5
Sloane *et al.*, 2020	■	■		■							3
Hanlon *et al.*, 2021	■	■								■	3

ICT, information and communication technology.

Crespo-Rivas JC et al. Are antimicrobial stewardship interventions effective and safe in long-term care facilities? A systematic review and meta-analysis. Clin Microb Infect 2021; 27(10): 1431-1438. DOI: 10.1016/j.cmi.2021.06.003

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EQUIPO PROA

- Consensuar e implementar protocolos sobre el diagnóstico y tratamiento de las principales enfermedades infecciosas
- Promoción de tratamientos coste efectivos
- Desarrollo de actividades formativas

AÑO 2022

- MONITORIZACIÓN del consumo de antibióticos (J01, J02) mediante DOT
- Tasas de SENSIBILIDAD de los principales patógenos a los principales ANTIBIÓTICOS
- Tasa de CULTIVOS URINARIOS cursados en ITUs
- % de pacientes con CISTITIS (no sonda vesical) con tratamiento >7 días
- % de pacientes con INFECCIÓN RESPIRATORIA con tratamiento >7 días

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¡MUCHAS GRACIAS!

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