

50 years in Infectious Diseases

Emilio Bouza Santiago

Departamento de Medicina. U. Complutense

Emérito Asistencial. Comunidad de Madrid

Servicio de Microbiología y E. Infecciosas

Instituto de Investigación Biomédica Gregorio Marañón

Fundación de Ciencias de la Salud

Fundación Ramón Areces



Disclaimer

I have no conditions limiting the expression of my free opinion in this talk.

Some Prevalent ID in Europe and the USA

The 70s

80s

90s

00s

10s

20s

The 70s

An specialty in extinction due to the
antibiotics

The beginning of nosocomial infections.

The 70's in Europe: Classic ID vs nosocomial ID



Clínica Puerta de Hierro

Classic Community vs Nosocomial ID
The need for Infection Control

The 70's: The USA.



1975.- UCLA and Seattle
First large research programs
of Bone Marrow Transplantation

Terrible infectious
complications

The need for a strong ID team

The University of California Los Angeles (UCLA). 1975



Prof. William Hewitt

Prof Sidney Finegold

Prof Lowell S. Young

Prof Colin Jordan

Prof William Martin

Prof Richard D. Meyer

Prof Lamar Johnson

1970's.- Prevention and treatment of *P. carinii* pneumonia

ANTIMICROBIAL AGENTS AND CHEMOTHERAPY, Mar. 1974, p. 289-293
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Vol. 5, No. 3
Printed in U.S.A.

Efficacy of Trimethoprim and Sulfamethoxazole in the Prevention and Treatment of *Pneumocystis carinii* Pneumonitis

WALTER T. HUGHES, PAUL C. McNABB, THOMAS D. MAKRES, AND SANDOR FELDMAN
*Infectious Diseases Service, St. Jude Children's Research Hospital, and Departments of Pediatrics and
Microbiology, University of Tennessee Medical Units, Memphis, Tennessee 38101*

Received for publication 12 December 1973

Hughes WT. *A.A.C.* 1974; 5: 289-293.

MEDICAL INTELLIGENCE ARCHIVE

Trimethoprim-Sulfamethoxazole Treatment of *Pneumocystis carinii* Pneumonia in Adults

William K. Lau, M.D., and Lowell S. Young, M.D.

Lau WK, Young LS. *N Engl J Med* 1976;
295:716-718

First major step on chemotherapeutic prevention of infection in the immunocompromised

The 70's: The USA.

Cocci. Meningitis. Intrathecal Amphotericin B



Intra thecal
administration of
Amphotericin B

0025-7974/81/6003-0139\$02.00/0
MEDICINE
Copyright © 1981 by The Williams & Wilkins Co.

Vol. 60, No. 3
Printed in U.S.A.

Coccidioidal Meningitis

AN ANALYSIS OF THIRTY-ONE CASES AND REVIEW OF THE LITERATURE¹

EMILIO BOUZA, M.D.,² JERROLD S. DREYER, M.D.,³ WILLIAM L. HEWITT, M.D.,⁴
RICHARD D. MEYER, M.D.⁵

Bouza E. *Medicine* (Baltimore)
. 1981 May;60(3):139-72.

Legionella pneumophila: The sick buildings today



The 70's in USA: The Legionella outbreak

Severe pneumonias

Mortality of 30%.

Poor response to β -lactams

Better response to macrolides

No pathogen is identified



1970's: Legionnaires' Disease (July 1976)

The New England Journal of Medicine

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Volume 297

DECEMBER 1, 1977

Number 22

LEGIONNAIRES' DISEASE

Description of an Epidemic of Pneumonia

DAVID W. FRASER, M.D., THEODORE R. TSAI, M.D., WALTER ORENSTEIN, M.D.,
WILLIAM E. PARKIN, D.V.M., DR. P.H., H. JAMES BEECHAM, M.D., ROBERT G. SHARRAR, M.D.,
JOHN HARRIS, M.D., GEORGE F. MALLISON, M.P.H., STANLEY M. MARTIN, M.S.,
JOSEPH E. McDADE, PH.D., CHARLES C. SHEPARD, M.D., PHILIP S. BRACHMAN, M.D.,
AND THE FIELD INVESTIGATION TEAM*

The hotel in Philadelphia and the American Legion.
Erythromycin works for this entity.

The 70's in Europe: Classic ID vs nosocomial ID



Very large institutions. More invasive surgery. Immunosuppression

1980.- The end of smallpox

- The last person known to have contracted smallpox naturally was Ali Maow Maalin in Somalia in 1977

*Research
Recherche*

Bulletin of the World Health Organization, 58 (2): 279-283 (1980)

The world's last endemic case of smallpox: surveillance and containment measures*

A. DERIA,¹ Z. JEZEK,² K. MARKVART,³ P. CARRASCO,³ & J. WEISFELD³

The 80s

The need for modern ID

New Units of Infectious Diseases

Clin. Microb. Laboratories

The need for scientific societies

AIDS

The 80's: The ID and Microbiology societies.



Founded in
1979

First
Congress in
Seville 1984

The foundation of ESCMID



Founded in 1983

First Congress in
Bologne in 1983

CMI
CLINICAL MICROBIOLOGY
AND INFECTION



CMI. Since 1995

Jacques Acar
Emilio Bouza
Kewin Towner
Didier Raoult
Leonard Leibovici



The 80's in Spain: The end of Brucellosis

REVIEWS OF INFECTIOUS DISEASES • VOL. 9, NUMBER 4 • JULY-AUGUST 1987
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INTERNATIONAL NOTES

Brucellar Meningitis

**Emilio Bouza, Manuel García de la Torre,
Francisco Parras, Antonio Guerrero,
Marta Rodríguez-Créixems, and José Gobernado**

*From the Infectious Diseases Unit (Microbiology Service)
and the Neurology Service, Hospital Ramón y Cajal,
Madrid, Spain*

Neurobrucellosis develops in less than 5% of cases of systemic brucellosis; however, most patients with neurobrucellosis have meningeal involvement. Seven new cases of brucellar meningitis and 17 cases from the Spanish- and English-language medical literature are analyzed in terms of epidemiologic data, clinical manifestations, laboratory results for cerebrospinal fluid and serum, treatment, and course of the disease. Brucellar meningitis mimics other neurologic and nonneurologic conditions, and its diagnosis is only suggested in the presence of adequate epidemiologic information. Isolation of *Brucella* from the cerebrospinal fluid is uncommon. Treatment is accomplished with the combination of tetracycline or doxycycline and streptomycin, rifampin, or both. Mean length of therapy in the seven new cases was 8.5 months. Brucellar meningitis has a better prognosis than other forms of chronic meningitis, and mortality is low for reasons that are not clear; however, the incidence of minor sequelae is high.

Journal of Hospital Infection (2005) 61, 80-83



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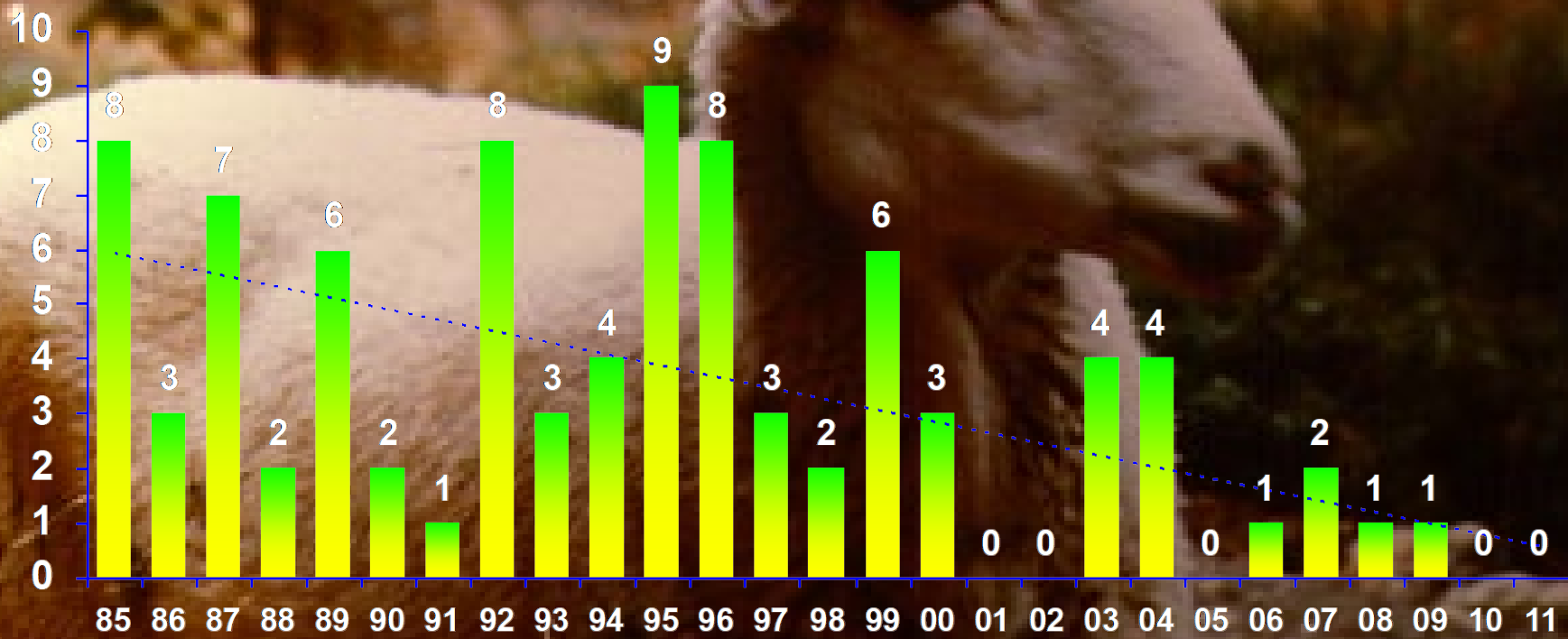
Laboratory-acquired brucellosis: a Spanish national survey[☆]

**E. Bouza*, C. Sánchez-Carrillo, S. Hernangómez, M. José González,
The Spanish Co-operative Group for the Study of Laboratory-acquired
Brucellosis**

Servicio de Microbiología Clínica-Unidad de Enfermedades Infecciosas-VIH, Hospital General Universitario 'Gregorio Marañón', Universidad Complutense, Madrid, Spain

Received 8 April 2002; accepted 21 February 2005

The 80's in Spain: The end of Brucellosis



Pneumocystis 1981. California/New York

> [MMWR Morb Mortal Wkly Rep. 1981 Jul 3;30\(25\):305-8.](#)

Kaposi's sarcoma and Pneumocystis pneumonia among homosexual men--New York City and California

Pneumocystis Pneumonia -- Los Angeles

As part of its commemoration of CDC's 50th anniversary, MMWR is reprinting selected MMWR articles of historical interest to public health, accompanied by a current editorial note.

On June 4, 1981, MMWR published a report about *Pneumocystis carinii* pneumonia in homosexual men in Los Angeles. This was the first published report of what, a year later, became known as acquired immunodeficiency syndrome (AIDS). This report and current editorial note appear below.

In the period October 1980-May 1981, 5 young men, all active homosexuals, were treated for biopsy-confirmed *Pneumocystis carinii* pneumonia at 3 different hospitals in Los Angeles, California. Two of the patients died. All 5 patients had laboratory-confirmed previous or current cytomegalovirus (CMV) infection and candidal mucosal infection. Case reports of these patients follow.

5 Homosexual patients. Young. **Not immunosuppressed**

Pneumonia due to *P. carinii* + Kaposi sarcoma

1981. M.M.W.R.

The happy 80s?. The wrath of God

**BACK
TO THE
80S**



THE SUN, Thursday, February 7, 1985

AIDS IS THE WRATH OF GOD, SAYS VICAR

BY HUGH WHITFORD
**VICAR yesterday branded the gay plague
S as the wrath of God.**

The Rev Owen Leigh-Williams claimed homosexuals offended the Lord and told them to repent. The controversial clergyman of St Andrew's Church in Chelmsford where he is chaplain, died from AIDS. Mr Leigh-Williams, 53, died three hundred years before the Great Plague, and died 20 years before the Black Death.



**Ex-ballet
boss is
victim 53**

A FORMER boss of a world famous ballet company was named last night as the 53rd AIDS victim to die in Britain. Musician John Lewis, 40, from Avon, Bath, died after spending ten days in isolation at Bristol's Ham Green Hospital. Mr Lewis...

1985.- HTLV-III Virus and AIDS

Human T-Cell Leukemia (Lymphotropic) Retroviruses and Their Causative Role in T-Cell Malignancies and Acquired Immune Deficiency Syndrome

ROBERT C. GALLO

The cause of AIDS is a Retrovirus

Gallo R. 1985

Virology | 1 November 1985

Lymphadenopathy-Associated Virus: From Molecular Biology to Pathogenicity

Montagnier L. 1985

LUC MONTAGNIER, M. D.

Zidovudine (AZT) The first therapeutic agent

The 90s

Infections in AIDS patients

Nosocomial infections

European Study Group on Nosocomial Infections

Transplant populations. More and more

Growing interest in invasive fungal infections

The 90's: Europe

ORIGINAL PAPERS: PDF ONLY

Latent *Haemophilus influenzae pneumonia* in patients infected with HIV

Moreno, Santiago; Martinez, Rafael[†]; Barros, Carlos[†]; Gonzalez-Lahoz, Juan^{*}; Garcia-Delgado, Emilio[†]; Bouza, Emilio^{*}

[Author Information](#) ☺

AIDS 5(8):p 967-970, August 1991.

September 1992

Pneumococcal Pneumonia in Adult Hospitalized Patients Infected With the Human Immunodeficiency Virus

M. E. García-Leoni, MD; S. Moreno, MD; P. Rodeñó, MD; [et al](#)

» [Author Affiliations](#)

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Clinical Microbiology and Infection, Volume 5 Number 5, May 1999

Disseminated infection due to *Mycobacterium simiae* in an AIDS patient: case report and review

Clin Microbiol Infect 1999; 5: 294–296

Luis Alcalá¹, María Jesús Ruiz-Serrano¹, Jaime Cosín¹, Fernando García-Garrote¹, Arturo Ortega² and Emilio Bouza¹

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THE NEW ENGLAND JOURNAL OF MEDICINE

March 5,

TUBERCULOUS MENINGITIS IN PATIENTS INFECTED WITH THE HUMAN IMMUNODEFICIENCY VIRUS

JUAN BERENGUER, M.D., SANTIAGO MORENO, M.D., FERNANDO LAGUNA, M.D., TERESA VICENTE, M.D.,
MAGDALENA ADRADOS, M.D., ARTURO ORTEGA, M.D., JUAN GONZÁLEZ-LAHOZ, M.D.,
AND EMILIO BOUZA, M.D.

Many AIDS related infections

The 90's: Europe

Treatment of AIDS-associated progressive multifocal leukoencephalopathy with highly active antiretroviral therapy

Pilar Miralles, Juan Berenguer, Darío García de Viedma, Belén Padilla, Jaime Cosin, Juan Carlos López-Bernaldo de Quirós, Lucía Muñoz*, Santiago Moreno[†] and Emilio Bouza

Clinical Trial > [Antivir Ther.](#) 1997 Dec;2(4):229-36.

Zidovudine monotherapy versus zidovudine plus zalcitabine combination therapy in HIV-positive persons with CD4 cell counts 300–500 cells/mm³: a double-blind controlled trial. The M50003 Study Group Coordinating and Writing Committee

JOURNAL OF CLINICAL MICROBIOLOGY, Apr. 1997, p. 1013–1015
0095-1137/97/\$04.00+0
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Vol. 35

Impact of the Human Immunodeficiency Virus Epidemic on Detection of *Mycobacterium* Isolates in a General Hospital

EMILIO BOUZA,^{1*} JAVIER ALBADALEJO,¹ EMILIA CERCENADO,¹ M. JESÚS RUIZ SERRANO,¹ TERESA VICENTE,¹ AND ARTURO ORTEGA²

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Fever of Uncertain Origin in Patients Infected with the Human Immunodeficiency Virus

Pilar Miralles, Santiago Moreno, Miguel Pérez-Tascón, Jaime Cosin, María D. Díaz, and Emilio Bouza

From the HIV Unit, Department of Clinical Microbiology and Infectious Diseases, Hospital General Gregorio Marañón, Madrid, Spain

Mycobacterium celatum as a cause of disseminated infection in an AIDS patient

Clin Microbial Infect 1997; 3: 582–584

Many AIDS related infections

The 90's: The solid organ transplant patients

0950-2688(200104)19:04:1-0
MICR 9(4):54-73, 201
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Vol. 80, No. 1
Printed in U.S.A.

Visceral Leishmaniasis in Human Immunodeficiency Virus (HIV)-Infected and Non-HIV-Infected Patients

A Comparative Study

VICENTE PINTADO, M.D., PABLO MARTÍN-RABADÁN, M.D.,
MARÍA LUISA RIVERA, M.D., SANTIAGO MORENO, M.D., AND EMILIO BOUZA, M.D.

➤ [Eur J Clin Microbiol Infect Dis.](#) 1990 Apr;9(4):283-5. doi: 10.1007/BF019680

High incidence of tuberculosis in renal patients

M E García-Leoni ¹, C Martín-Scapa, P Rodeño, F Valderrábano, S Moreno, E Bouza

February 22, 1993

Mycobacterium tuberculosis Bacteremia in Patients With and Without Human Immunodeficiency Virus Infection

398

Emilio Bouza, MD; Maria Dolores Díaz-López, MD; Santiago Moreno, MD; [et al](#)

» [Author Affiliations](#)

Arch Intern Med. 1993;153(4):496-500. doi:10.1001/archinte.1993.00410040

Tuberculosis in Heart Transplant Recipients

P. Muñoz, J. Palomo, R. Muñoz, M. Rodríguez-Creixéms,
T. Pelaez, and E. Bouza

*From the Divisions of Microbiology-Infectious Diseases and Cardiology,
Hospital Universitario "Gregorio Marañón," Madrid, Spain*

Tuberculosis still around

The 90's: Europe

Search results

Save

E

ILT

Case Reports > [J Infect.](#) 1991 Jan;22(1):103-5. doi: 10.1016/0163-4453(91)91346-y.

Ciprofloxacin as an effective antibacterial agent : serratia endocarditis

> [Eur J Clin Microbiol Infect Dis.](#) 1994 Jun;13(6):504-7. doi: 10.1007/BF01974643.

Treatment of deep mycoses with liposomal amphotericin B

[J Berenguer](#)¹, [P Muñoz](#), [F Parras](#), [V Fernández-Baca](#), [T Hernández-Sampelayo](#), [E Bouza](#)

ANTIMICROBIAL AGENTS AND CHEMOTHERAPY, Sept. 1998, p. 2452-2455
0066-4804/98/\$04.00+0
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In Vitro Activity of the New Glycopeptide LY333328 against Multiply Resistant Gram-Positive Clinical Isolates

FERNANDO GARCÍA-GARROTE,* EMILIA CERCENADO, LUIS ALCALÁ, AND EMILIO BOUZA

Fluoroquinolones and other agents

The 90's: Hepatitis C

Detection of hepatitis C viral sequences in non-A, non-B hepatitis

AMY J. WEINER GEORGE KUO DANIEL W. BRADLEY
FERRUCCIO BONINO GIORGIO SARACCO CINDY LEE
JODY ROSENBLATT QUI-LIM CHOO MICHAEL HOUGHTON

Death to hepatitis A not B

Long live hepatitis C (New virus)



Journal of Hospital Infection (2002) 00: 1–9

doi:10.1053/jhin.2002.1316, available online at <http://www.idealibrary.com> on IDEAL®



Demolition of a hospital building by controlled explosion: the impact on filamentous fungal load in internal and external air

E. Bouza, T. Peláez, J. Pérez-Molina, M. Marín, L. Alcalá, B. Padilla, P. Muñoz and the Aspergillus Study Team*

Mayo 30, 1999

The 90's: The beginning of the end of HIV

The Vancouver Conference.

Three drugs do much more than two



One World, One Hope

The 2000s

C. difficile outbreaks

More bacterial infections

New drugs

The HPV vaccine.

The 2020's: The Canadian outbreak of CDI (027)

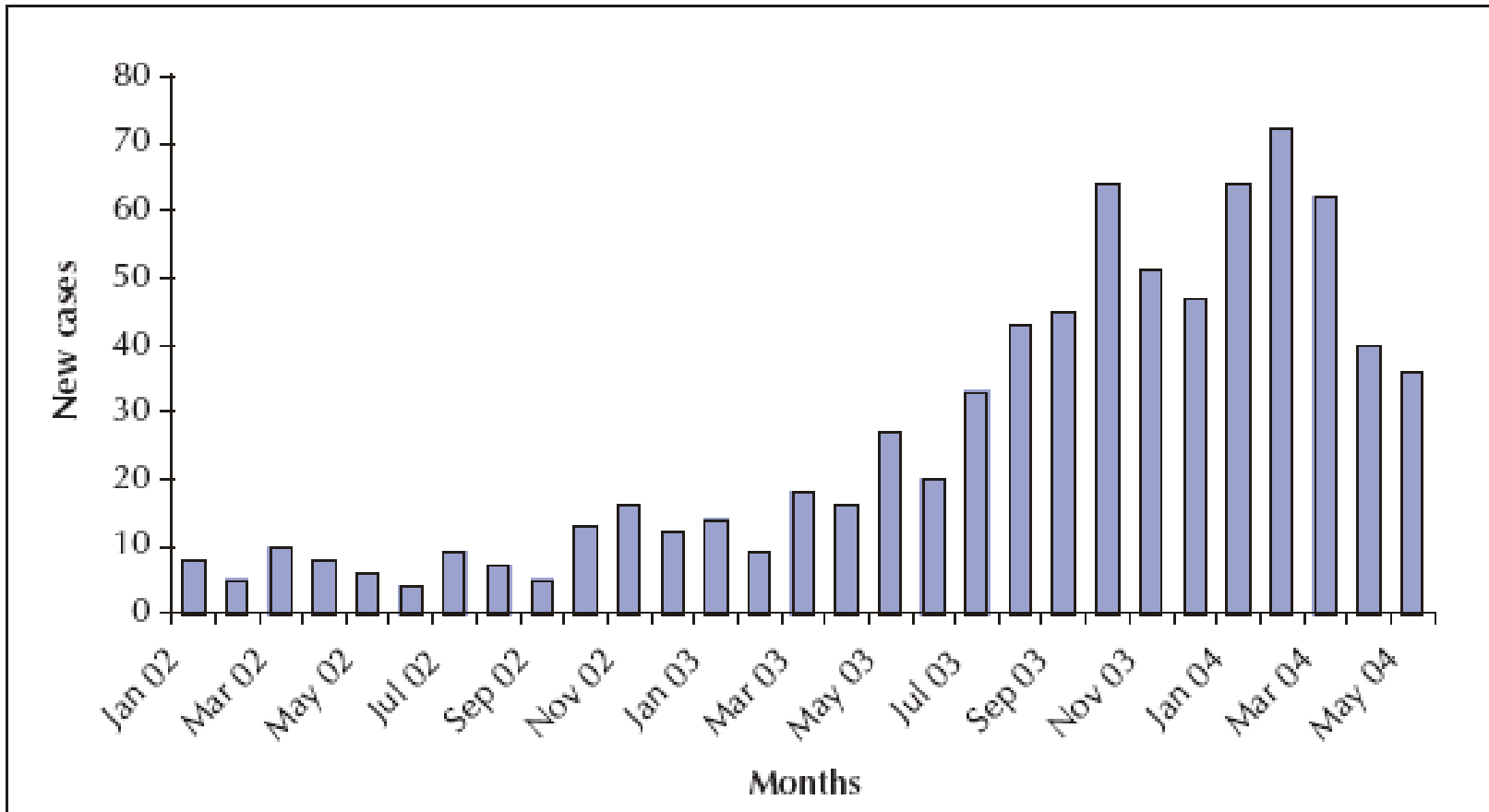


Fig. 1: New cases of nosocomial and community-acquired *Clostridium difficile*-associated diarrhea (CDAD; diagnosed by positive cytotoxin assay result) reported by the microbiology laboratory at the Centre hospitalier universitaire de Sherbrooke.

Outbreak in 2004.
Quebec

2.1/1,000 admissions in
2002

18/1,000 admissions in
2005

Superbug overtakes hospitals

Sherbrooke hospital superbug killed 100

DILAPIDATED FACILITIES PARTLY TO BLAME
Expert links epidemic of C. difficile to strain on health-care resources. 'We didn't invest. We didn't modernize. We are paying the price'

BRENDA BRANSWELL
THE GAZETTE

The C. difficile cases also struck with greater severity the study said. The number of patients who died within 30 days

Bactérie C. difficile: Québec crée un comité d'experts

PASCALLE BRETON

Après une opération au genou et un traitement aux antibiotiques, Susan McDougall a soudainement eu des poussées de fièvre et de la diarrhée. Deux symptômes de la bactérie *Clostridium difficile* qui auraient dû mettre la puce à l'oreille du personnel de l'hôpital.

Après six jours d'hospitalisation à l'hôpital général juif de Montréal, Mme McDougall a été envoyée dans un centre de réadap-

pital, mais ça n'a pas été détecté avant que je sois au centre de réadaptation. J'avais de la fièvre, de la diarrhée, mais jamais on ne m'a demandé si j'allais bien. Au début, je pensais que c'était normal, que c'était simplement une conséquence de l'opération et des antibiotiques », raconte Mme McDougall.

Afin d'éviter la répétition d'un tel incident, le ministère de la Santé et des Services sociaux a mandaté un comité d'experts pour tenter de comprendre les

« Les moyens ne sont pas très compliqués, mais ils sont compliqués à mettre en place parce qu'ils touchent tout le monde. C'est d'abord l'hygiène. Les gens doivent apprendre à se laver les mains en passant d'un patient à l'autre », indique le Dr Michel A. Bureau, directeur général à la Direction des services de santé et de la médecine universitaire au ministère, en précisant que le personnel médical a encore du progrès à faire en cette matière.

tion des médecins microbiologistes infectiologistes du Québec. Les patients eux-mêmes doivent être vigilants, principalement lorsqu'ils prennent des antibiotiques. « Le patient devrait toujours aviser son médecin lors d'apparition de diarrhée, de douleurs abdominales ou de hausses de température inexplicables. Ces symptômes peuvent survenir quelques semaines après l'arrêt des antibiotiques », précise le Dr Poirier.

La population ne doit pas dire pour autant de prendre des médicaments, mais « la d'antibiotiques devrait être justifiée. Il ne faut jamais aller auprès de son médecin pour prendre des antibiotiques sans le recommander », affirme le Dr Poirier. Depuis environ un an, le taux de Montréal font face à la recrudescence des cas d'infections. Avant l'éclatement des cas, il y avait en moyenne de 2,2

Superbug death toll still rising

C. DIFFICILE
Infections have increased by four

Infections microbiennes préoccupantes

Une bactérie a causé plus de morts l'an dernier à Montréal que le SRAS à Toronto

PASCALLE BRETON

Plus de patients sont morts à Montréal l'an dernier d'une infection contractée à l'hôpital que dans l'épidémie de SRAS qui a frappé Toronto.

Publiée dans le *Journal de l'Association médicale canadienne (JAMC)*, une nouvelle étude recense le nombre de patients qui, lors d'un séjour à l'hôpital, ont contracté une infection à la bactérie *Clostridium difficile* (*C. difficile*),

qui s'attaque principalement au colon.

En 2003 et au début de 2004, la bactérie a été détectée chez 1400 patients hospitalisés dans six établissements montréalais. De ce nombre, 79

personnes sont mortes. Comparativement, 44 personnes sont décédées en Ontario à la suite du syndrome respiratoire sévère aigu (SRAS).

» Voir INFECTIONS en A4

Jumpy Montrealers avoiding hospitals

FEAR CONTRACTING BACTERIAL INFECTION

Patients seeking advice, simple reassurance in wake of 79 deaths linked to potent bug

AARON DERFEL
GAZETTE HEALTH REPORTER

Hospitals across Montreal are fielding calls from anxious patients who are concerned about

catching an aggressive strain of intestinal bacteria blamed for the deaths of at least 79 people since last year.

Some Montrealers have decided to stay away from hospitals,

cancelling blood tests or appointments.

A 75-year-old heart patient called *The Gazette* yesterday to share his fears about the highly contagious bacterium, *Clostridium difficile*, which can cause repeated bouts of diarrhea and resist common antibiotics.

"If I go in as an in-patient, I'm worried that I could end up like the 79 that died," said the Côte

des Neiges pensioner, who didn't want his name published.

At the Jewish General Hospital, where 16 patients have died, the blood-test centre was eerily quiet at 9:15 a.m. A few patients sat in the waiting area. A woman who went there to have her blood drawn said the centre is usually packed at that hour.

Please see STRAIN, Page A5

Superbug most lethal in 10 years - experts

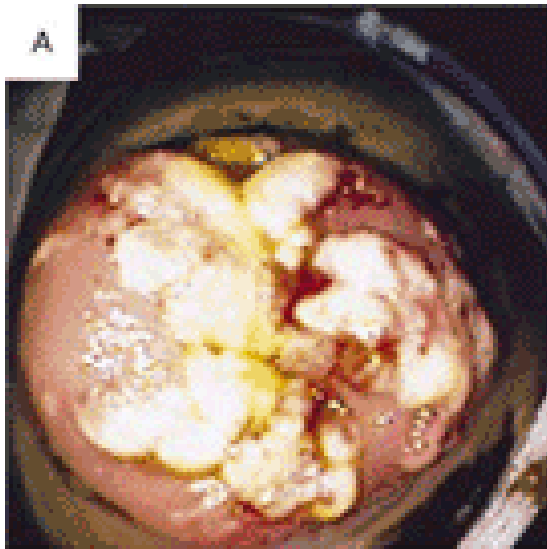
APPEARS TO HAVE MUTATED 18 MONTHS AGO

Microbiologists and physicians have been studying bug for six months to confirm it's a new strain originating in Montreal

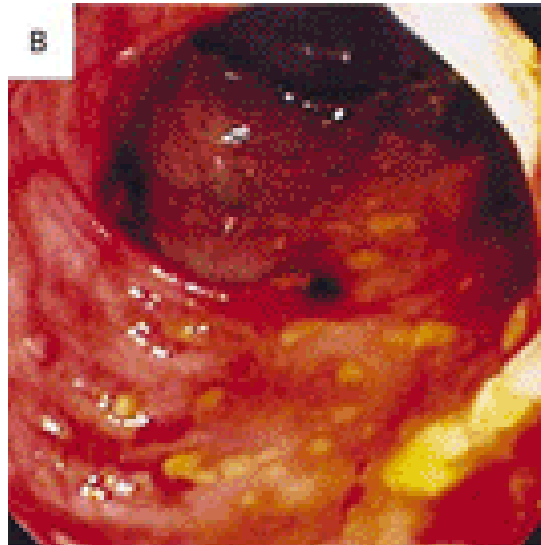
AARON DERFEL
GAZETTE HEALTH REPORTER

The virulent strain of bacteria that has killed at least 79 people in Montreal since last year is

A similar outbreak of C. difficile has struck hospitals in Calgary, where 16 people have died. In the U.S. midwest, doctors are reporting a surge in C. difficile infections and recurring cases. Microbiology Internet cha

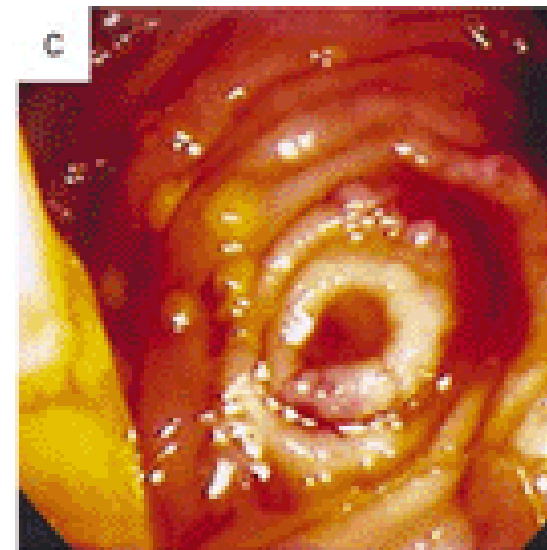


Estoma de colostomía

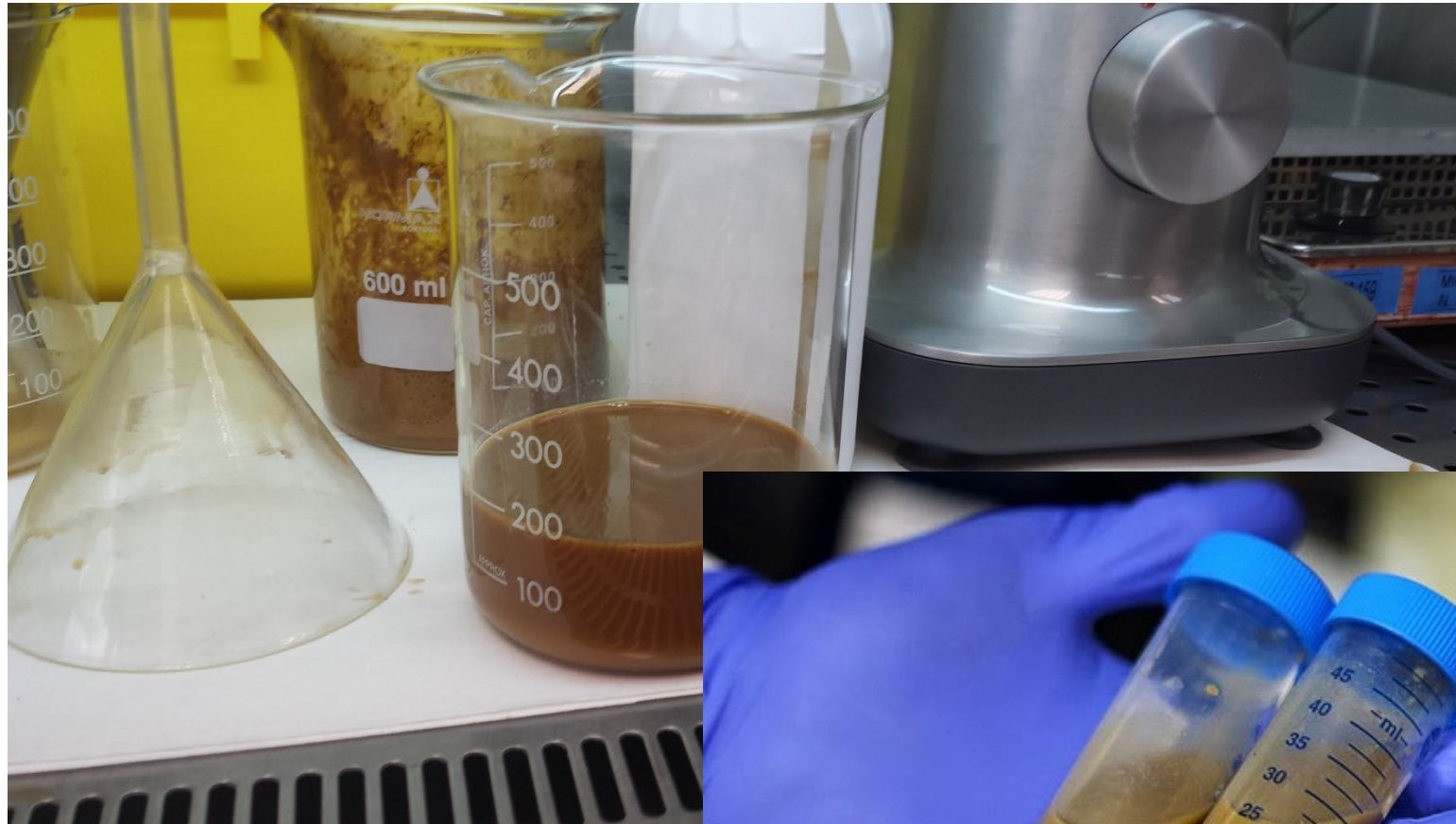


C. transverso

Ciego

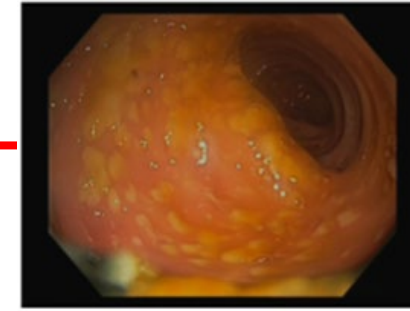


The 90's: Europe.



FMT . A difficult start

CDI: Incidence in Europe



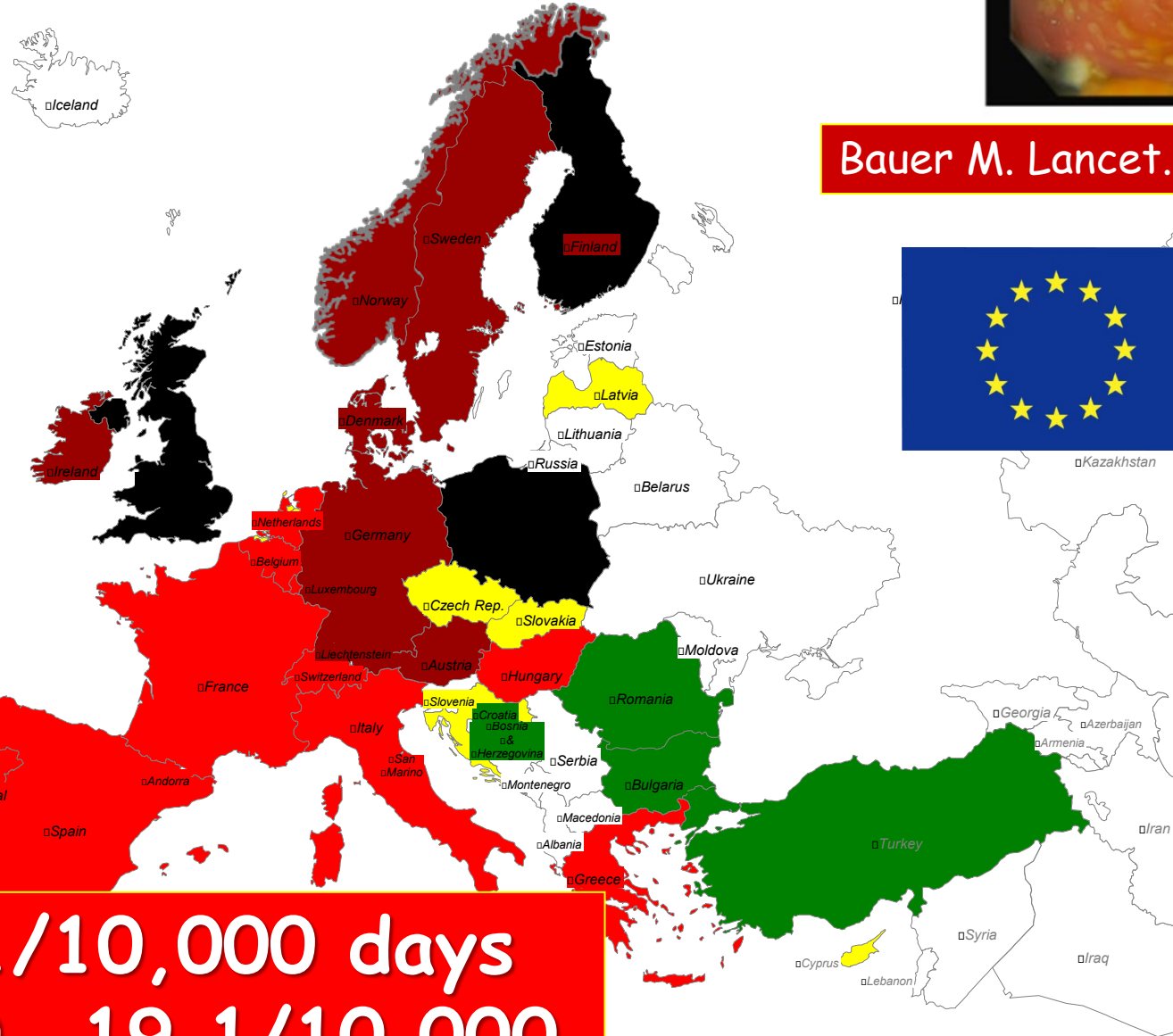
< 1/10,000

1-2/10,000

2-5/10,000

5-10/10,000

>10/10,000

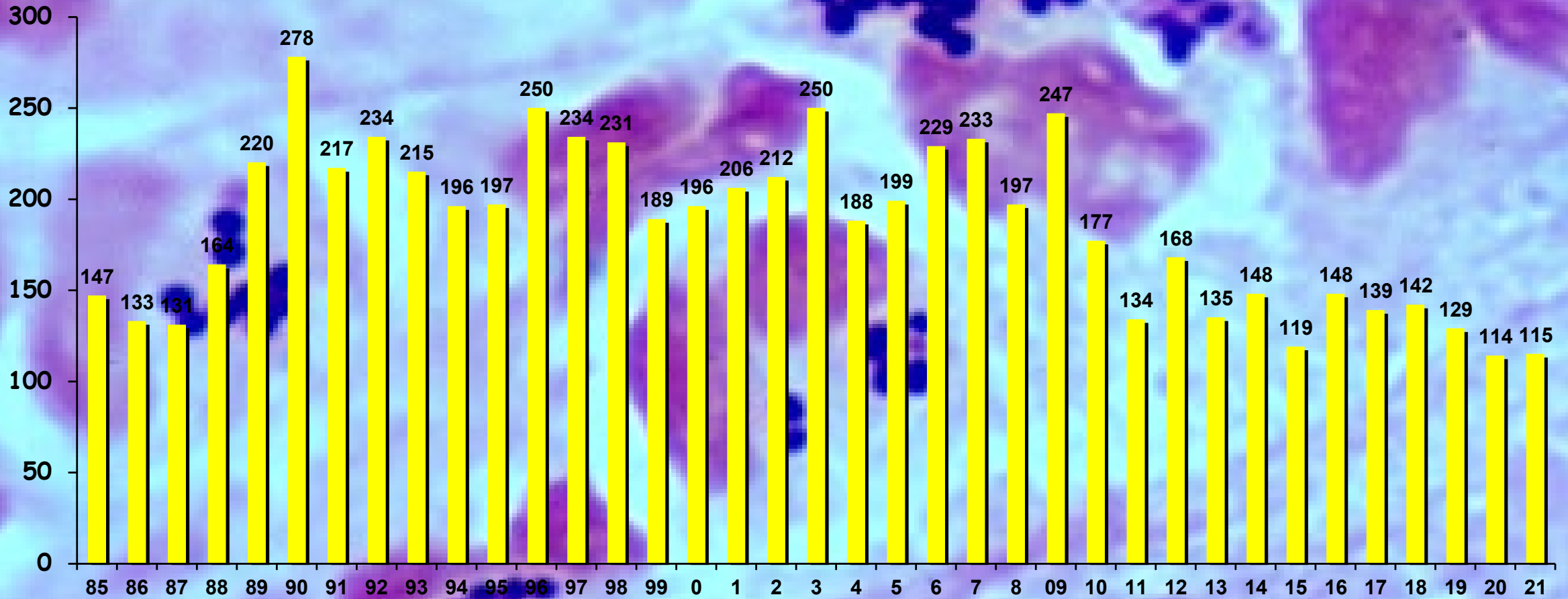


Bauer M. Lancet. 2011



4.1/10,000 days
0.0 -19.1/10,000

S. aureus BSI



The 2000's: Europe

Journal of Antimicrobial Chemotherapy (2001) **47**, 77–81

JAC

Brief reports

***In vitro* activity of linezolid against multiply resistant Gram-positive clinical isolates**

Emilia Cercenado*, Fernando García-Garrote and Emilio Bouza

Linezolid therapy for infective endocarditis

P. Muñoz¹, M. Rodríguez-Creixéms¹, M. Moreno², M. Marín¹, V. Ramallo³, E. Bouza¹
and the GAME Study Group*

Linezolid: pharmacokinetic characteristics and clinical studies

E. Bouza and P. Muñoz

Clinical Microbiology and Infectious Diseases Department, Hospital General Universitario 'Gregorio Marañón', Madrid, Spain

Finally a new class of antimicrobial agents

Bouza E. *Clin Microbiol Infect.* 2007 Feb;13(2):211-215. doi:
10.1111/j.1469-0691.2006.01585.x

The 2000's: The ESGNI studies

ESCMID STUDY GROUP REPORT

A European perspective on nosocomial urinary tract infections I. Report on the microbiology workload, etiology and antimicrobial susceptibility (ESGNI–003 study)

E. Bouza, R. San Juan, P. Muñoz, A. Voss and J. Kluytmans on behalf of the Co-operative Group of the European Study Group on Nosocomial Infections (ESGNI)

ESCMID STUDY GROUP REPORT

A European perspective on nosocomial urinary tract infections II. Report on incidence, clinical characteristics and outcome (ESGNI–004 study)

E. Bouza, R. San Juan, P. Muñoz, A. Voss and J. Kluytmans on behalf of the Co-operative Group of the European Study Group on Nosocomial Infections (ESGNI)

European Study Group of Nosocomial Infections (ESGNI)

The 2000's: ESCMID

Postoperative infections after major heart surgery and prevention of ventilator-associated pneumonia: a one-day European prevalence study (ESGNI-008)

[E. Bouza](#) • [J. Hortal](#)   • [P. Muñoz](#) • [J. Pascau](#) • [M.J. Pérez](#) • [M. Hiesmayr](#)

Infections following major heart surgery in European intensive care units: there is room for improvement (ESGNI 007 Study)

[E. Bouza](#) • [J. Hortal](#)   • [P. Muñoz](#) • ... [M.J. Riesgo](#) • [M. Hiesmayr](#)

on behalf of the European Study Group on Nosocomial Infections and the European Workgroup of

European Study Group of Nosocomial Infections (ESGNI)

The 2000's

Post-surgical invasive aspergillosis: An uncommon and under-appreciated entity

[Julia Jensen](#) • [Jesús Guinea](#)   • [Marta Torres-Narbona](#) • [Patricia Muñoz](#) • [Teresa Peláez](#) • [Emilio Bouza](#)

ORIGINAL ARTICLE

MYCOLOGY

Pulmonary aspergillosis in patients with chronic obstructive pulmonary disease: incidence, risk factors, and outcome

J. Guinea^{1,2}, M. Torres-Narbona¹, P. Gijón¹, P. Muñoz^{1,2}, F. Pozo^{2,3}, T. Peláez^{1,2}, J. de Miguel⁴ and E. Bouza^{1,2}

1) *Clinical Microbiology and Infectious Diseases Department, Hospital General Universitario Gregorio Marañón, Universidad Complutense*, 2) *CIBER de Enfermedades Respiratorias (CIBERES CD06/06/0058), Palma de Mallorca*, 3) *Pneumology Department and Clinical Epidemiology Unit, Hospital Universitario Doce de Octubre* and 4) *Pneumology Department, Hospital General Universitario Gregorio Marañón, Universidad Complutense, Madrid, Spain*

New conditions predisposing to Invasive Pulmonary Aspergillosis

2004.- Vaccine against Human Papillomavirus (HPV)

Efficacy of a bivalent L1 virus-like particle vaccine in prevention of infection with human papillomavirus types 16 and 18 in young women: a randomised controlled trial

*Diane M Harper, Eduardo L Franco, Cosette Wheeler, Daron G Ferris, David Jenkins, Anne Schuind, Toufik Zahaf, Bruce Innis, Paulo Naud, Newton S De Carvalho, Cecilia M Roteli-Martins, Julio Teixeira, Mark M Blatter, Abner P Korn, Wim Quint, Gary Dubin, for the GlaxoSmithKline HPV Vaccine Study Group**



Lancet 2004; 364: 1757-65

*Contributors listed at end of paper

Departments of Obstetrics and

•Vaccine against VHP. End of cervical cancer

Harper DM. *Lancet* 2004; 364: 1757-65

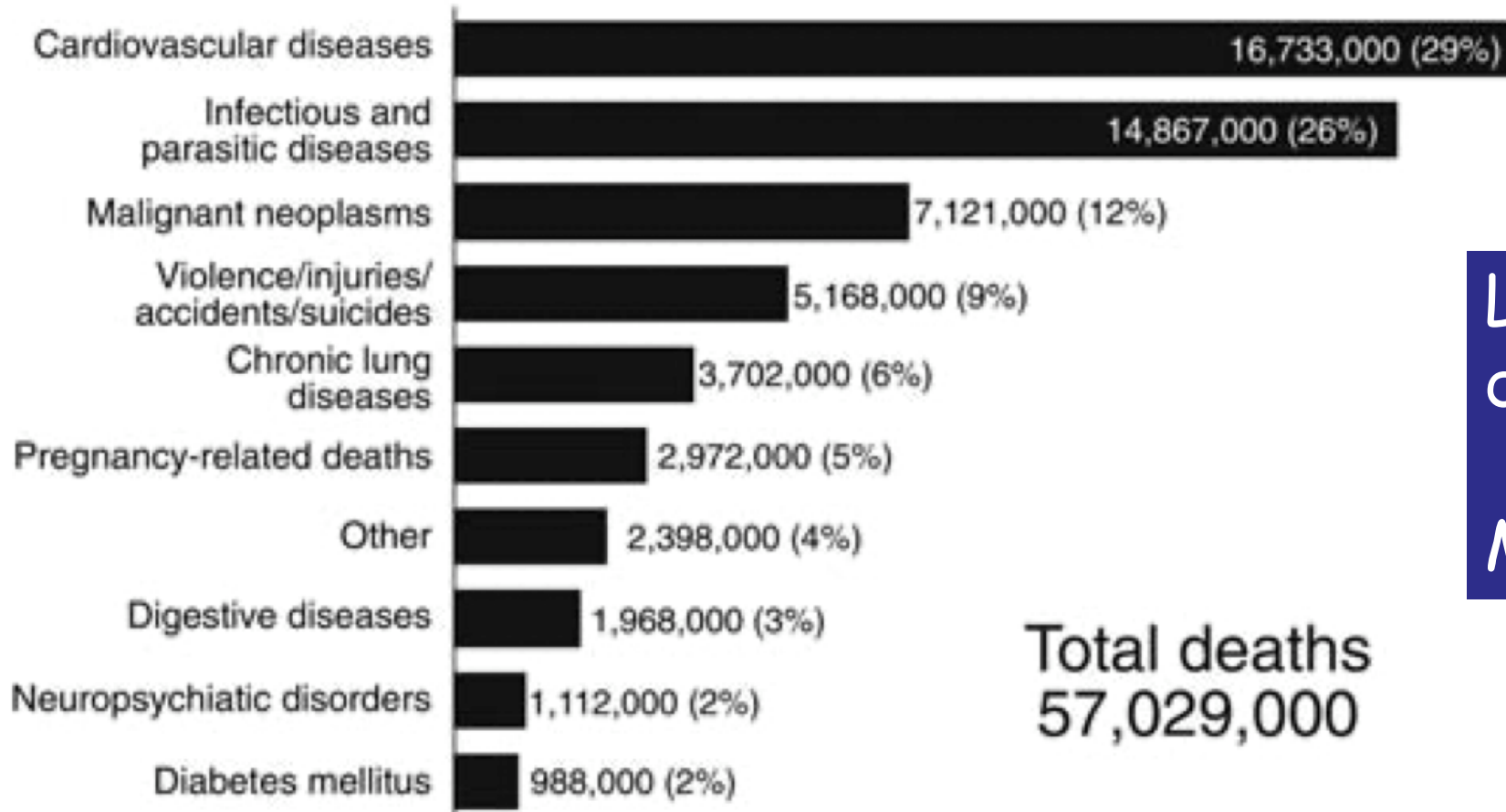
The 2010s

Emerging Infectious Diseases: a 10-Year Perspective from the National Institute of Allergy and Infectious Diseases

Anthony S. Fauci,* Nancy A. Touchette,* and Gregory K. Folkers*

Infection is the second cause of death worldwide

The 2010's: Europe



Total deaths
57,029,000

Leading causes of
deaths/year

More than 25% I.D

2011-2012. - New effective anti-tuberculous drugs

INT J TUBERC LUNG DIS 15(7):949-954
© 2011 The Union
doi:10.5588/ijtld.10.0616

Early bactericidal activity of delamanid (OPC-67683) in smear-positive pulmonary tuberculosis patients

Diacon AH. Int.J.Tuberc.Lung.Dis. 2011; 15: 949-954

A. H. Diacon,* R. Dawson,† M. Hanekom,* K. Narunsky,† A. Venter,* N. Hittel,‡ L. J. Geiter,§ C. D. Wells,§ A. J. Paccaly,§ P. R. Donald¶



Diacon AH. Antimicrobial Agents and Chemotherapy. 2012;56: 3271-3276

Randomized Pilot Trial of Eight Weeks of Bedaquiline (TMC207) Treatment for Multidrug-Resistant Tuberculosis: Long-Term Outcome, Tolerability, and Effect on Emergence of Drug Resistance

A. H. Diacon,^a P. R. Donald,^a A. Pym,^b M. Grobusch,^c R. F. Patientia,^a R. Mahanyele,^b N. Bantubani,^c R. Narasimooloo,^c T. De Marez,^d

New and highly effective treatment for Tbc. Shorter courses

The 2010's: Not only antibiotics. Immunotherapy

The NEW ENGLAND
JOURNAL *of* MEDICINE

ESTABLISHED IN 1812

JANUARY 26, 2017

VOL. 376 NO. 4

Bezlotoxumab for Prevention of Recurrent *Clostridium difficile* Infection

M.H. Wilcox, D.N. Gerding, I.R. Poxton, C. Kelly, R. Nathan, T. Birch, O.A. Cornely, G. Rahav, E. Bouza, C. Lee, G. Jenkin, W. Jensen, Y.-S. Kim, J. Yoshida, L. Gabryelski, A. Pedley, K. Eves, R. Tipping, D. Guris, N. Kartsonis, and M.-B. Dorr, for the MODIFY I and MODIFY II Investigators*

Bezlotoxumab: The world of monoclonal antibodies

The 2020s

The pandemic

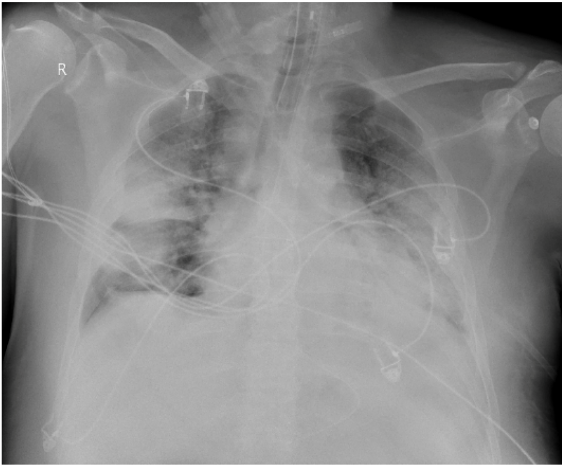
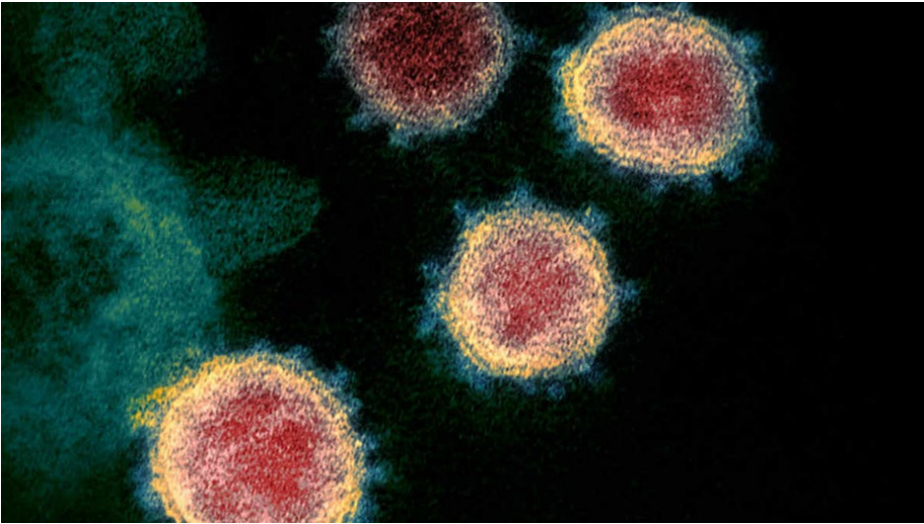
The elderly

The return to a better control of NIs

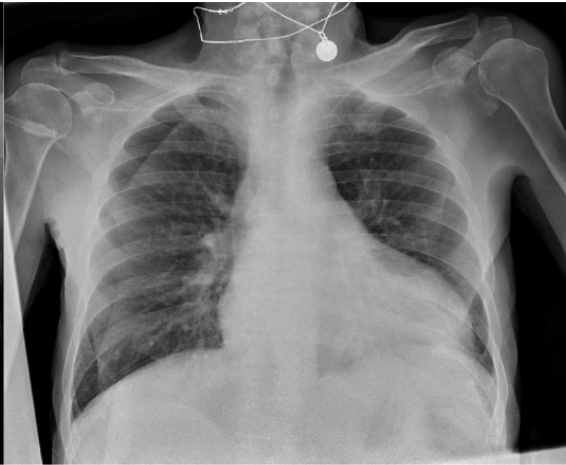
Non antibiotic treatment and

prevention of infections

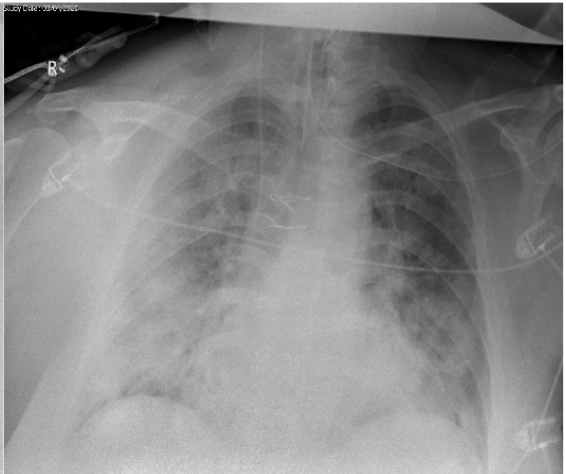
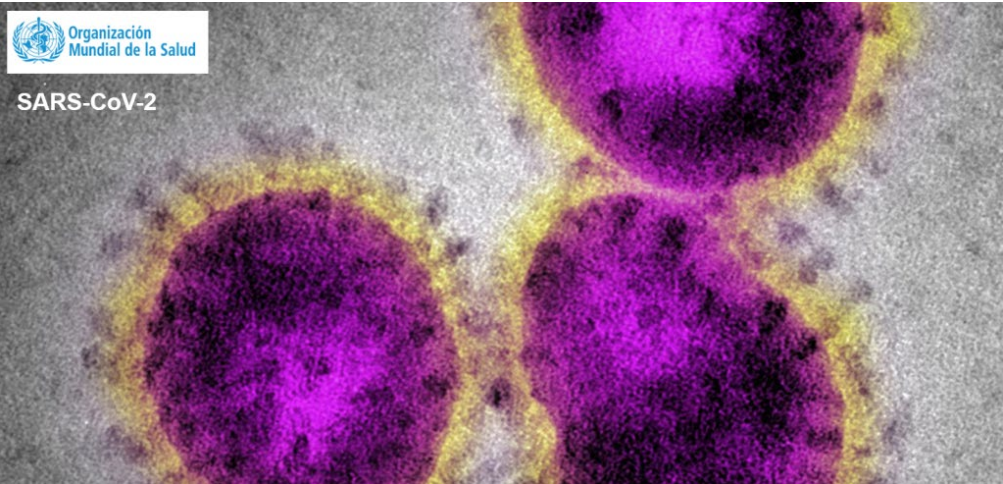
2020.-SARS-CoV-2. Again the wrath of God



c) Unilateral-paciente 74



d) Bilateral-paciente 10



The 2020's: The fall and rise of Sexually Transmitted Infections

Jorge Del Romero¹
Santiago Moreno Guillén²
Fernando Rodríguez-Artalejo³
Julián Ruiz-Galiana⁴
Rafael Cantón⁵
Pilar De Lucas Ramos⁶
Alejandra García-Botella⁷
Alberto García-Lledó⁸
Teresa Hernández-Sampelayo⁹
Javier Gómez-Pavón¹⁰
Juan González del Castillo¹¹
Mari Cruz Martín-Delgado¹⁵
Francisco Javier Martín Sánchez¹³
Manuel Martínez-Sellés¹⁴
José María Molero García¹⁵
Javier Gómez Castellá¹⁶
María Palomo¹⁷
Rocío García Berrio¹⁸
Aldina Couso González¹⁸
César Sotomayor¹⁹
Emilio Bouza²⁰

Sexually transmitted infections in Spain: Current status

¹Centro Sandoval. Hospital Clínico San Carlos. Madrid

²Infectious Diseases Service. Ramón y Cajal Hospital. University of Alcalá de Henares. Madrid.

³Department of Public Health. Autonomous University. Madrid

⁴Internal Medicine Service. Ruber International Hospital. Madrid.

⁵Microbiology Service. Ramón y Cajal Hospital and Ramón y Cajal Institute for Health Research (IRYCIS). Spanish Network for Research in Infectious Pathology (REIPI). Madrid.

⁶Emeritus. Pneumology Service. Gregorio Marañón General University Hospital, Complutense University. Madrid

⁷General Surgery Service. San Carlos University Clinical Hospital. Complutense University. Madrid.

⁸Cardiology Service. Prince of Asturias Hospital. University of Alcalá. Madrid.

⁹Pediatrics and ACES Service. Gregorio Marañón General University Hospital, Complutense University. Madrid.

¹⁰Geriatrics Service. Central Hospital of the Red-Cross. Alfonso X el Sabio University. Madrid

¹¹Emergency Service. San Carlos University Clinical Hospital. Complutense University. Madrid.

¹²Intensive Medicine Service. Torrejón University Hospital. Francisco de Vitoria University. Madrid

¹³Emergency Service. San Carlos University Clinical Hospital. Complutense University. Madrid.

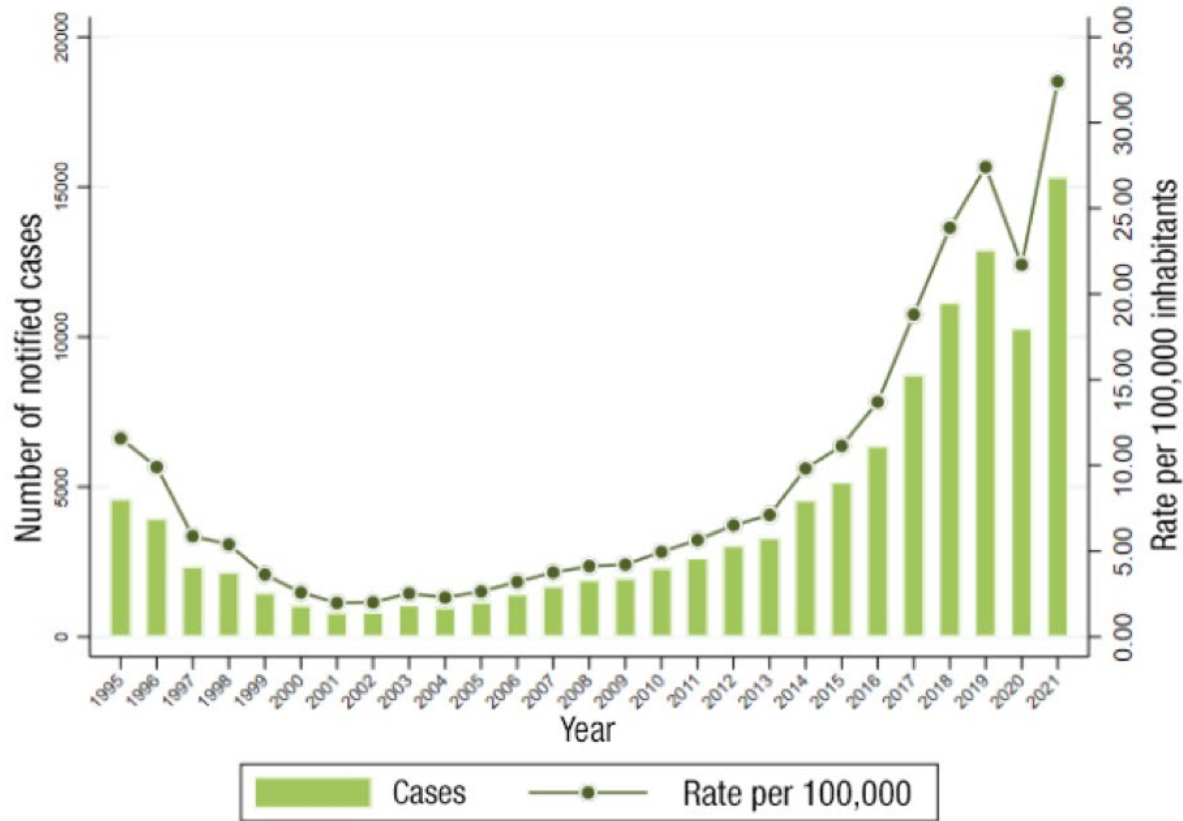
¹⁴Cardiology Service. Gregorio Marañón General University Hospital, European University. Madrid

¹⁵Family Medicine. Infectious diseases. Madrid.

¹⁶STI, HIV and Tuberculosis area. Ministerio de Sanidad y Consumo

Recent evolution
of STI in Spain

The 2020's: STI. Gonococcal disease in Spain



Recent evolution of gonococcal infection

Figure 9 Evolution of the incidence of gonococcal infection in Spain between 1995 and 2021. Adapted from reference [2].

The 2020's: Syphilis. Mainly MSM

J. Del Romero, et al.

Sexually transmitted infections in Spain: Current status

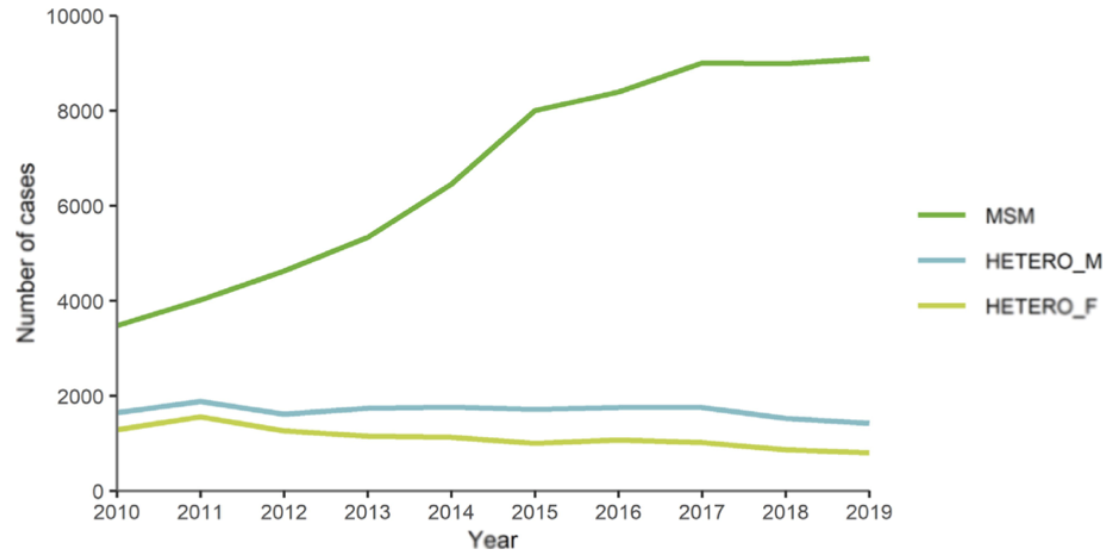


Figure 7 | Number of confirmed syphilis cases by gender, transmission, category and year in EU/EEA countries reporting consistently, 2010–2019. Obtained from reference [42].

Syphilis
MSM Increase

HAIs during the pandemic



Clinical Infectious Diseases

MAJOR ARTICLE



The Disproportionate Impact of Coronavirus Disease 2019 (COVID-19) Pandemic on Healthcare-Associated Infections in Community Hospitals: Need for Expanding the Infectious Disease Workforce

Sonali D. Advani,^{1,2,✉} Emily Sickbert-Bennett,³ Rebekah Moehring,^{1,2} Andrea Cromer,² Yuliya Lokhnygina,⁴ Elizabeth Dodds-Ashley,^{1,2}

Retrospective, longitudinal, multicenter cohort study
53 hospitals, academic and community

CLABSI	Increase 24%	CAUTI	Stable
VAP	Increase 34%	CID	Increase 4.2%

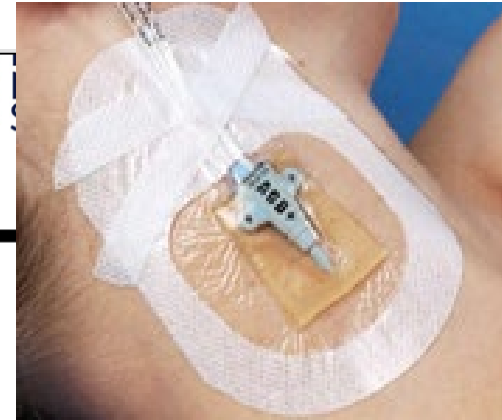
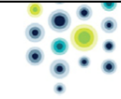
Advani SD. *C.I.D.* 2022 Aug 23;ciac684. doi: 10.1093/cid/ciac684. Online ahead of print.

The 2020's: COVID. Neglect of catheter care



Journal of Hospital Infection

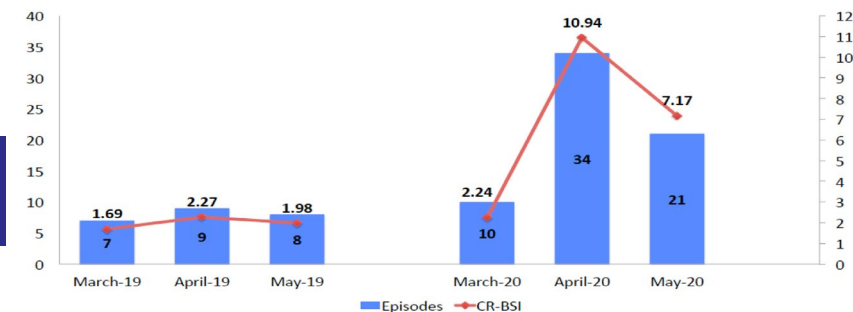
journal homepage: www.elsevier.com/locate/jhin



Increase in the frequency of catheter-related bloodstream infections during the COVID-19 pandemic: a plea for control

M.J. Pérez-Granda^{a,b,c,d,*}, C.S. Carrillo^a, P.M. Rabadán^a, M. Valerio^a,
M. Olmedo^a, P. Muñoz^{a,b,c,e}, E. Bouza^{a,b,c,e}

Influence of the COVID Pandemic y CR-BSI



The 2020's: Europe



of Chemotherapy

Review

Revista Española de Quimioterapia

doi:10.37201/req/002.2023

Emilio Bouza^{1*}
José Augusto García Navarro^{2*}
Sergio Alonso³
Juan Carlos Duran Alonso⁴
Carina Escobar⁵
Benito J. Fontecha Gómez⁶
María Isabel Galvá Borrás⁷
Amós José García Rojas⁸

Infection control in long term care institutions for the elderly: A reflection document on the situation in Spain

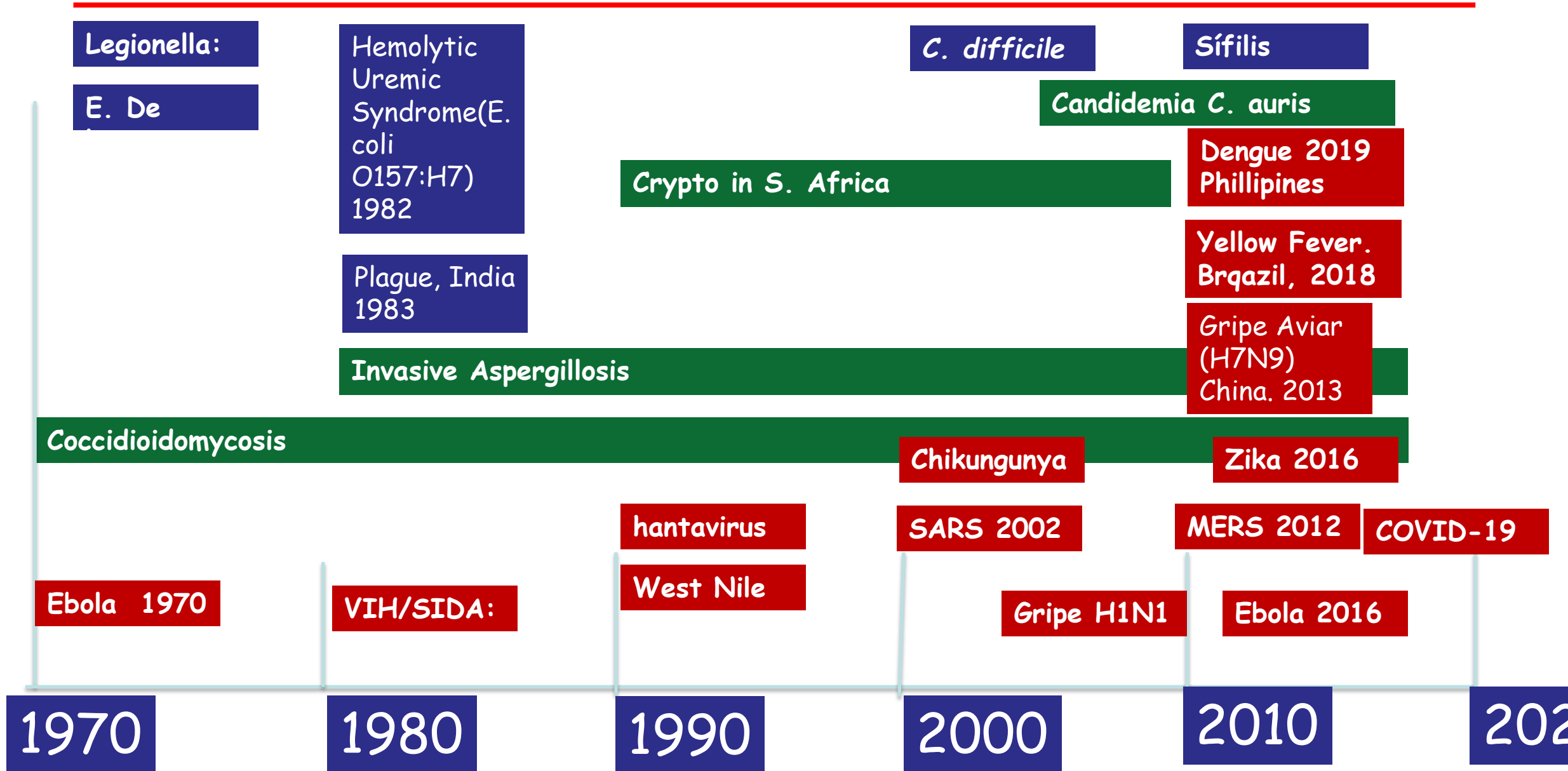
¹Servicio de Microbiología Clínica y Enfermedades Infecciosas, Hospital General Universitario Gregorio Marañón, Departamento de Medicina, Universidad Complutense de Madrid (UCM), Instituto de Investigaciones

Infection prevention in the elderly is a field of renewed interest.

Bouza E. Revista Española de Quimioterapia doi:10.37201/req/002.2023..

Emerging Infectious Diseases

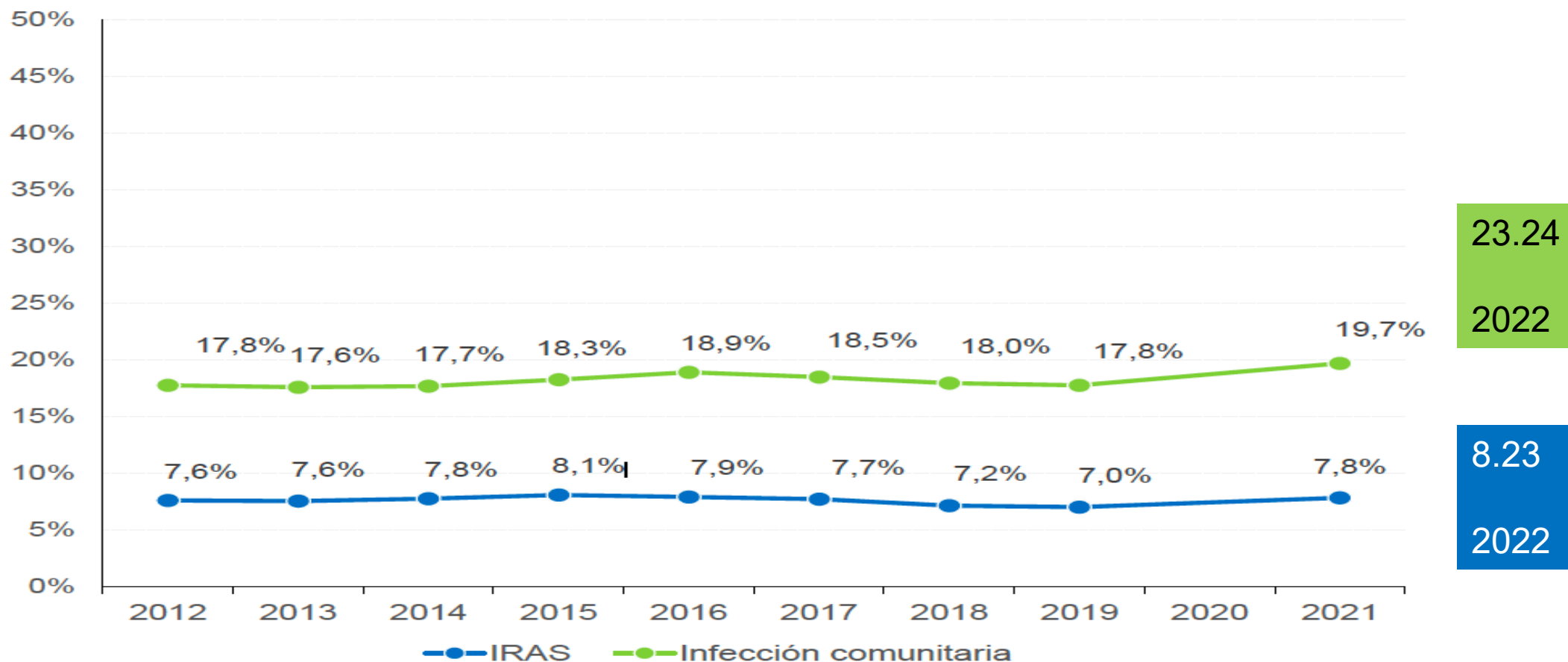
Main infectious outbreaks



Control of Nosocomial Infections
Antimicrobial resistance

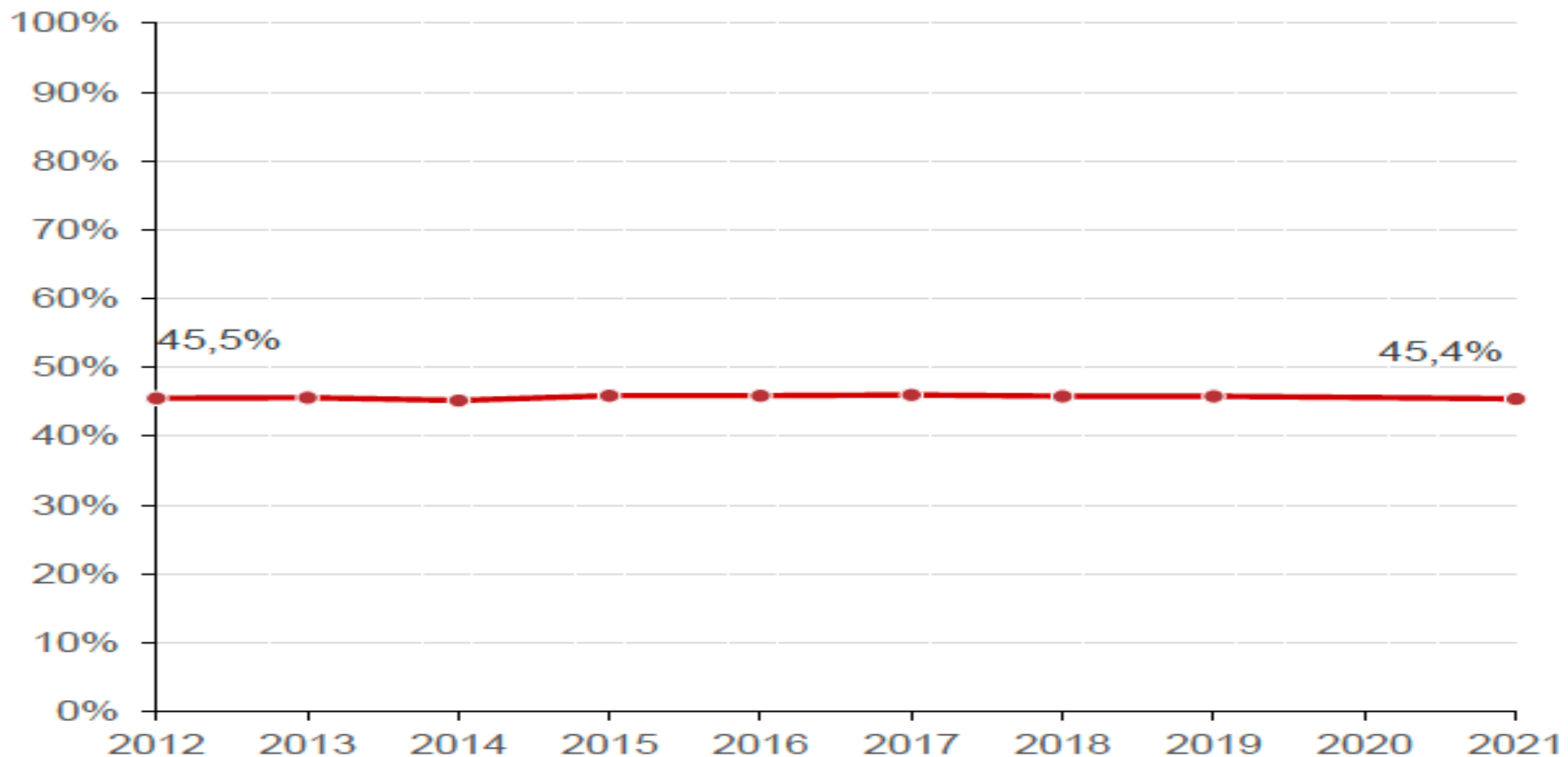
Infección Comunitaria/nosocomial en Hospitales españoles

Figura 5. Prevalencia de pacientes con IRAS e infecciones comunitarias. EPINE 2012-2021.



Prevalence of antimicrobial use in the hospitals of Spain

Figura 18. Prevalencia de uso de antimicrobianos. EPINE 2012-2021.



Misuse of antimicrobials. Still high

Antibiotic Misuse in Hospital, Outpatient, and Long-Term Care Settings

Muhammad Salman Ashraf, Paul P. Cook

37,2%



Fridkin S. M.M.W.R. 2014; 63: 194-200

75%



Morrill HJ. J.A.M.D.A 2016; 17: 183, e 1-16

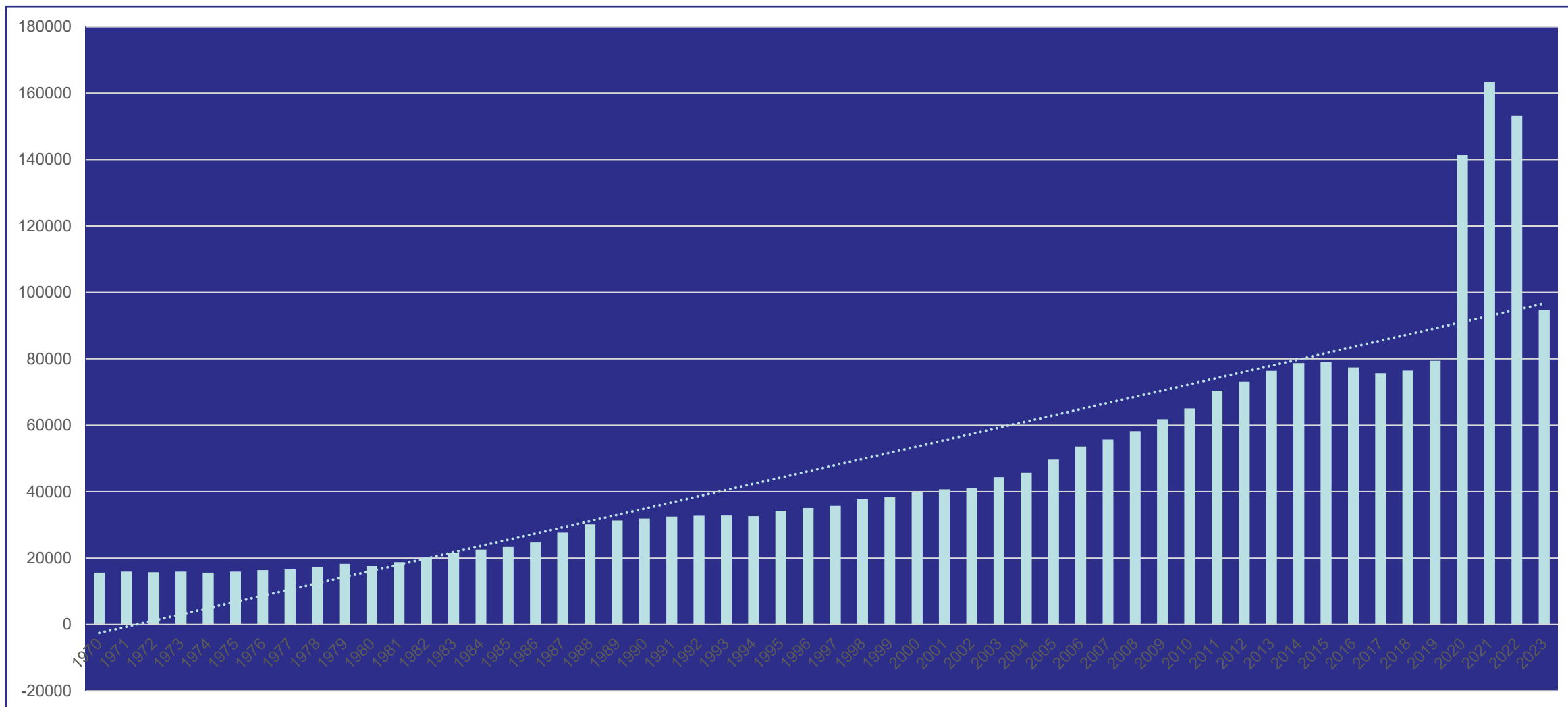
30%



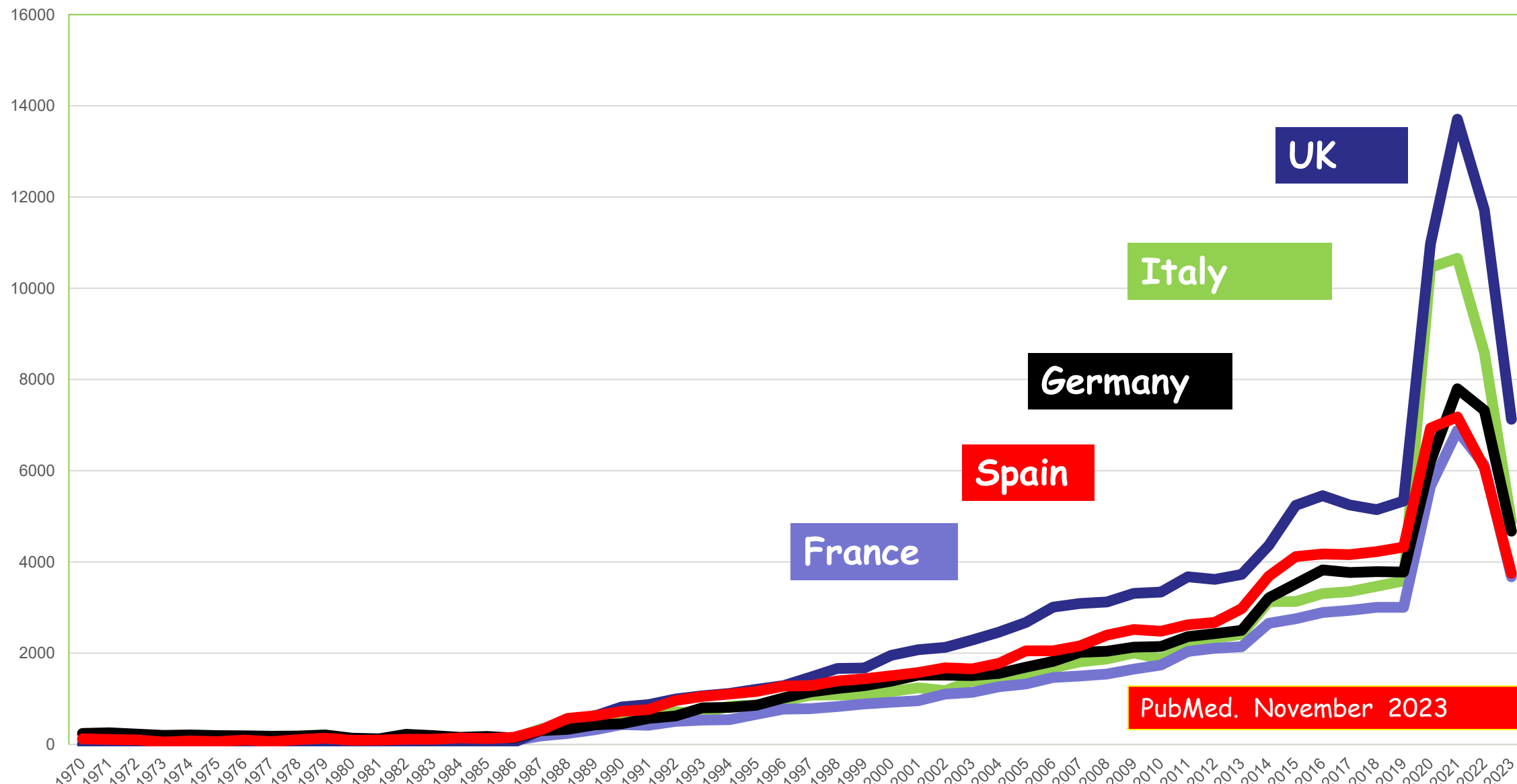
Fleming-Dutra KE. J.A.M.A. 2016; 315: 1864-1873

The scientific production in ID

Scientific production in Infections (50 years) [MeSH]



Scientific production in Infections (50 years) [MeSH]



The future.



Anna Hyatt Huntington. The flame of knowledge. 1955

The future is
already here



There is a generation that deserves our efforts

