

Measles Outbreak: The Tip of the Iceberg of the Anti-Vaccination Movement

How Evidence-Based Content Can Support to Contain This Crisis?

Ximena Alvira, MD, PhD

Budapest, September 17, 2019

A background image showing several dark, spherical measles virus particles with a textured surface, set against a light, hazy background.

Almost **83,000** people contracted measles in Europe in **2018** - the **highest** number in a **decade**

In the United States, the first three months of **2019** have seen **more cases** than all of **2018**

Four European countries are no longer **measles free**: Albania, Czechia, Greece, and the United Kingdom

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Media centre > Measles cases hit record high in the European Region

Media centre

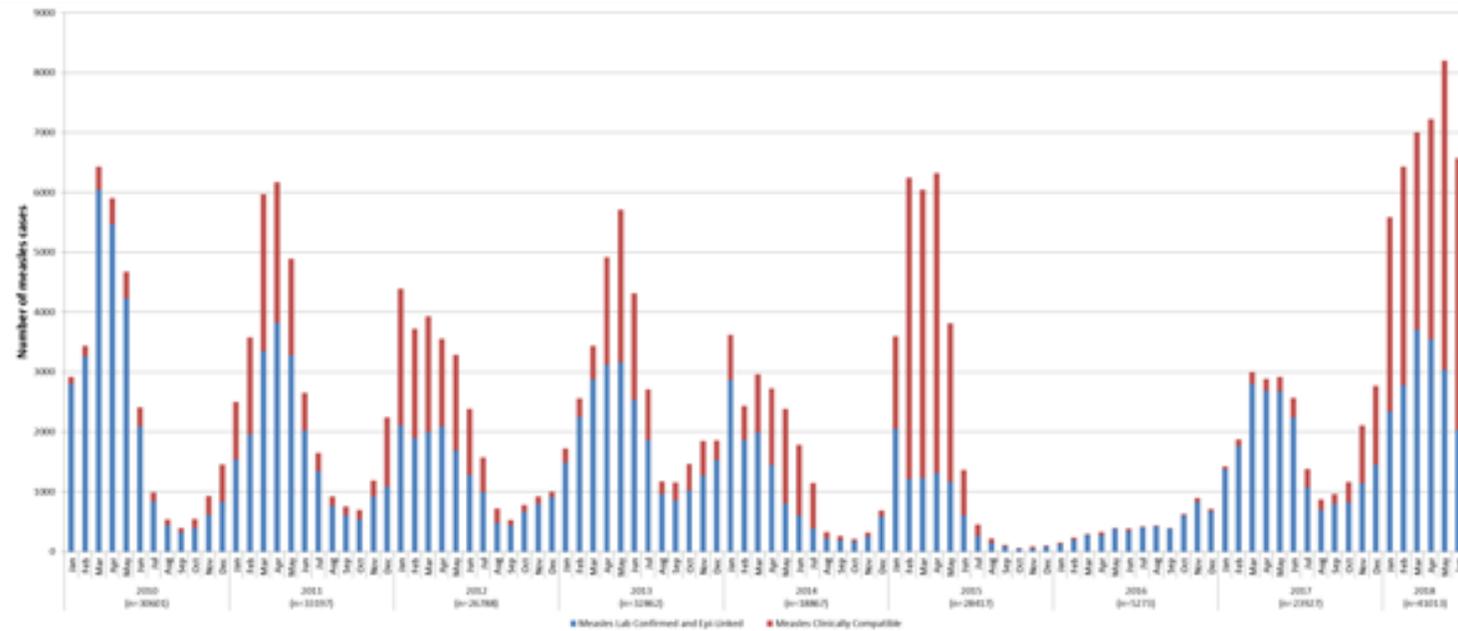
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 5.4K
 
 598

Copenhagen, Denmark, 20 Augu

Measles cases hit record high in the European Region

Distribution of measles cases by month and year of rash onset in the European Region Jan-2010 to Jun-2018



*Data source: Monthly aggregated and case-based data reported by Member States to WHO/Europe or via ECDC/TESSy



Ten threats to global health in 2019

Credits +



- **Air pollution and climate change**
- **Noncommunicable diseases**
- **Global influenza pandemic**
- **Fragile and vulnerable settings**
- **Antimicrobial resistance**
- **Ebola and other high-threat pathogens**
- **Weak primary health care**
- **Dengue**
- **HIV**
- **Vaccine hesitancy**



Research output for “vaccine AND hesitancy” from 2010-2019

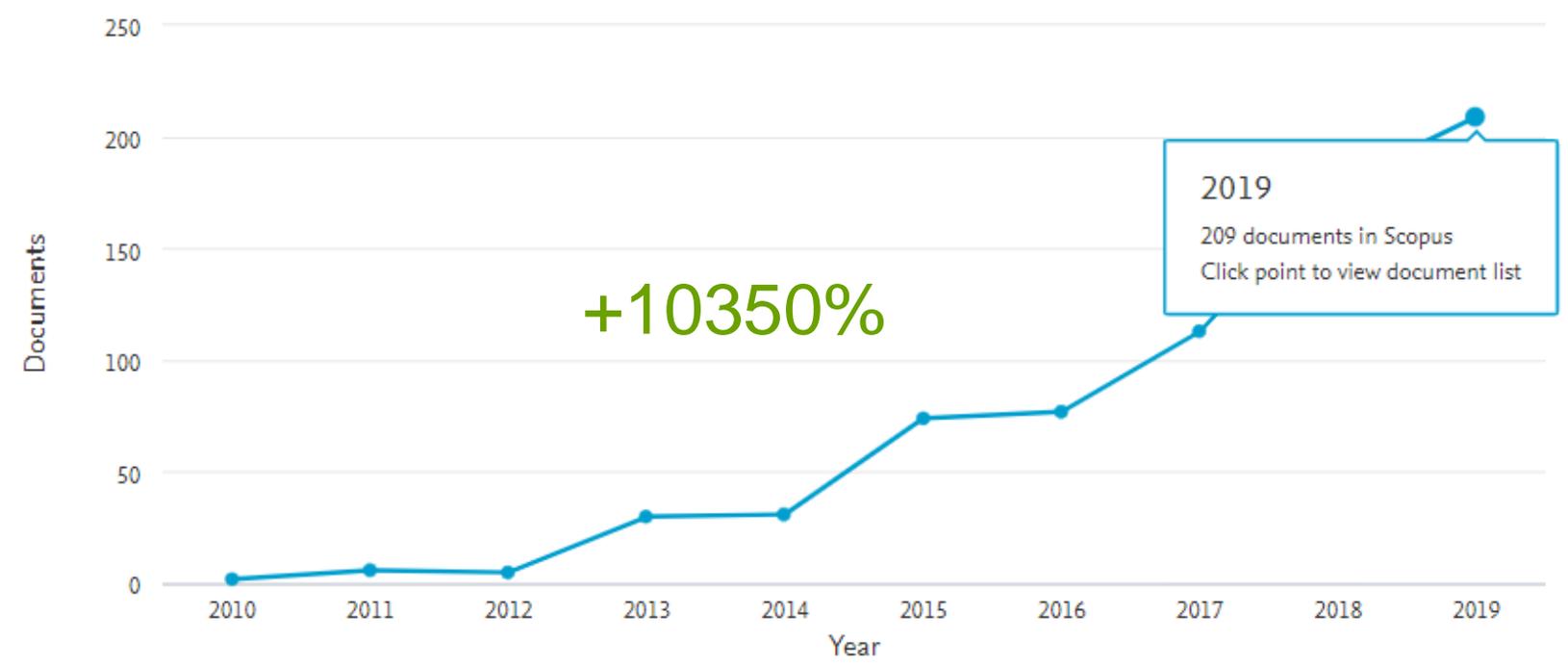
TITLE-ABS-KEY (vaccine AND hesitancy)

726 document results

Select year range to analyze: 2010 to 2019 Analyze

Year ↓	Documents ↑
2019	209
2018	179
2017	113
2016	77
2015	74
2014	31
2013	30
2012	5
2011	6
2010	2

Documents by year



Source: www.scopus.com

Systems biology approach predicts immunogenicity of the yellow fever vaccine in humans (Article)

Querec, T.D.^a, Akondy, R.S.^a, Lee, E.K.^b, Cao, W.^a, Nakaya, H.I.^a, Teuwen, D.^c, Pirani, A.^d, Kennedy, K.^e, Wu, H.^e, Bennouna, S.^a, Oluoch, H.^a, Miller, J.^a, Vencio, R.Z.^e, Mulligan, M. Pulendran, B.^{a,g} 

^aEmory Vaccine Center, Yerkes National Primate Research Center, 954 Gatewood Road, Atlanta, GA
^bCenter for Operations Research in Medicine and Healthcare, School of Industrial and Systems Engineering, Atlanta, GA 30332, United States
^cSanofi Pasteur, 2 avenue Pont Pasteur, Lyon Cedex 07, France

[View additional affiliations](#) 

Vaccine refusal, mandatory immunization, and the risks of diseases (Article)

Omer, S.B.^{a,b,c,g} , Salmon, D.A.^{c,e}, Ore...

^aHubert Department of Global Health, Rollins School of Public Health, Emory University, Atlanta, GA
^bEmory Vaccine Center, Emory University, Atlanta, GA
^cDepartment of International Health, Johns Hopkins University, Baltimore, MD

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see details	

434  Citations in Scopus
99th percentile

28.04  Field-Weighted Citation Impact

 PlumX Metrics
Usage, Captures, Mentions, Social Media and Citations beyond Scopus.

Citations

Citation Indexes:	276
Clinical Citations:	1

Usage

Abstract Views:	9865
Full Text Views:	2933
Link-outs:	2169
Downloads:	4

Captures

Readers:	1
Exports-Saves:	1558

651  Citations in Scopus
99th percentile

14.73  Field-Weighted Citation Impact

 PlumX Metrics
Usage, Captures, Mentions, Social Media and Citations beyond Scopus.

Citations

Citation Indexes:	578
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Usage

Abstract Views:	339
Full Text Views:	211
Link-outs:	1

Captures

Readers:	1239
Exports-Saves:	16

Late 1890s – 1912

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THE LANCET

EDITORIAL | [VOLUME 390, ISSUE 10107, P2016, NOVEMBER 04, 2017](#)

The opioid crisis in the USA: a public health emergency

[The Lancet](#)

Published: November 04, 2017 • DOI: [https://doi.org/10.1016/S0140-6736\(17\)32808-8](https://doi.org/10.1016/S0140-6736(17)32808-8)

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OUTLOOK • 11 SEPTEMBER 2019

Tracing the US opioid crisis to its roots

Understanding how the opioid epidemic arose in the United States could help to predict how it might spread to other countries.



1950s

Watch "Soldiers of Fortune"
For exciting adventures, see the
7-Up TV show every week.

Copyright © 1950 by The Coca-Cola Company

Why we have the youngest customers in the business

This young man is 11 months old—and he isn't our youngest customer by any means.

For 7-Up is so pure, so wholesome, you can even give it to babies and feel good about it. Look at the back of a 7-Up bottle. Notice that all our ingredients are listed. (That isn't required of soft drinks, you know—but we're proud to do it and we think you're pleased that we do.)

By the way, Mom, when it comes to toddlers—if they like to be coaxed to drink their milk, try this: Add 7-Up to the milk in equal parts, pouring the 7-Up gently into the milk. It's a wholesome combination—and it works! Make 7-Up your family drink. *You like it . . . it likes you!*

Bevies Ambassadors served from taps or top-mashers. Seven-Up is sold in bottles only.

Nothing does it like Seven-Up!

September 3, 2019

Association Between Soft Drink Consumption and Mortality in 10 European Countries

Amy Mullee, PhD^{1,2,3}; Dora Romaguera, PhD^{4,5}; Jonathan Pearson-Stuttard, BMBCh^{6,7}; [et al](#)

» [Author Affiliations](#)

JAMA Intern Med. Published online September 3, 2019. doi:10.1001/jamainternmed.2019.2478

Key Points

Question Is regular consumption of soft drinks associated with a greater risk of all-cause and cause-specific mortality?

Findings In this population-based cohort study of 451 743 individuals from 10 countries in Europe, greater consumption of total, sugar-sweetened, and artificially sweetened soft drinks was associated with a higher risk of all-cause mortality. Consumption of artificially sweetened soft drinks was positively associated with deaths from circulatory diseases, and sugar-sweetened soft drinks were associated with deaths from digestive diseases.

1950s

More Doctors Smoke **CAMELS** than any other cigarette!

Doctors in every branch of medicine were asked, "What cigarette do you smoke?" The brand named most was Camel!

You'll enjoy Camels for the same reasons so many doctors enjoy them. Camels have cool, cool softness, pack after pack, and a flavor unmatched by any other cigarette. Make this sensible test: Smoke only Camels for 30 days and see how well Camels please your taste, how well they suit your throat as your steady smoke. You'll see how enjoyable a cigarette can be!

THE DOCTORS' CHOICE IS AMERICA'S CHOICE!



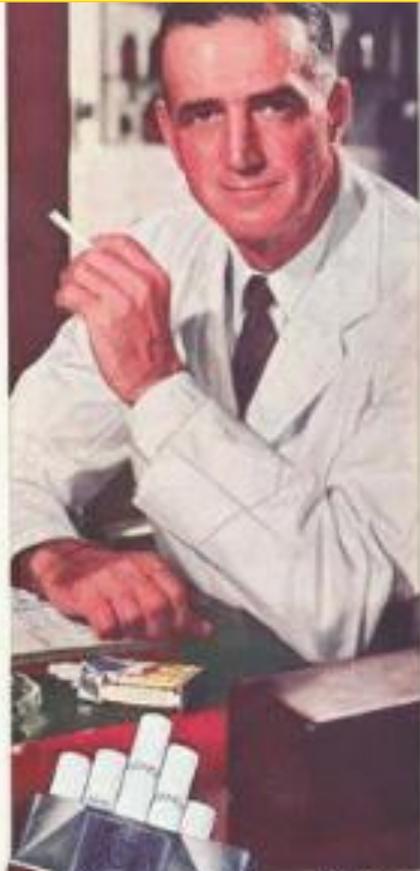
AUDREY HEPBURN says: "I pick Camels. They agree with my throat and taste wonderful!"



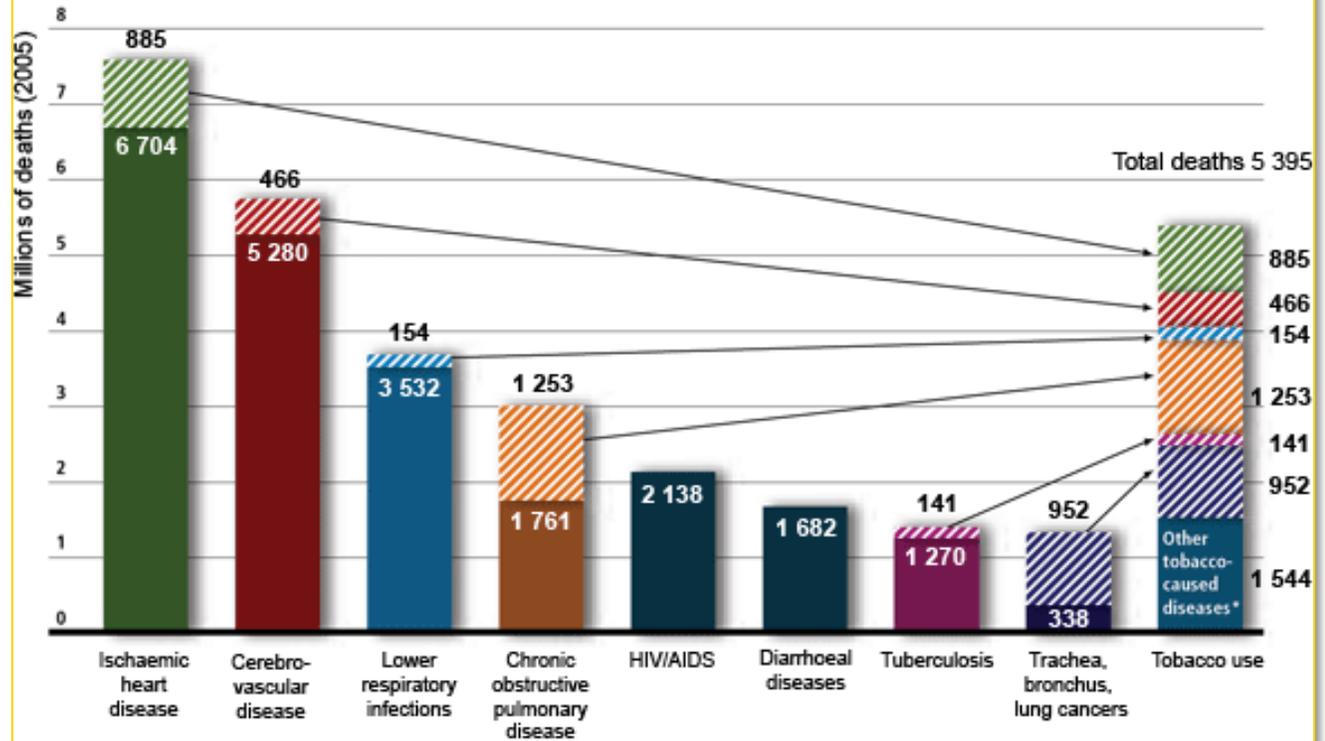
BEN HURST says: "I get more pleasure from Camels than from any other brand!"



STEVE MCQUEEN says: "Camels are my steady and smooth. I'm hooked 'em for good!"



TOBACCO USE IS A RISK FACTOR FOR SIX OF THE EIGHT LEADING CAUSES OF DEATH IN THE WORLD



The approach

**Empowering people
with current, credible,
evidence-based
information**



- Information to **educate, empower, and engage the population**
- Information to **educate and empower** healthcare professionals and support **decision-making**
- Information to enhance **transparency and quality** in research

Information to educate, empower, and engage the population



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Tiếng Việt

Information to **educate** and **empower** healthcare professionals and support **decision-making**

Contents lists available at [ScienceDirect](#)

Vaccine

ELSEVIER

FULL TEXT ARTICLE

Nurses' attitudes and beliefs about influenza and the influenza vaccine in Alabama and Mississippi

Andrew J. Leidner and Charles Stoecker

Bayo C. Willis MPH and Noni E. MacDonald PhD

AJIC: American Journal of Infection Control
Professionalism in Infection Control

Review
Cost-effectiveness
Background
The U.S. Advisory Committee on Immunization Practices (ACIP) has recommended annual influenza immunization among health care workers (HCWs) and from workers and their families. Health care workers (HCWs) and health care workers is...
Participants and...

COMPLACENCY

CONFIDENCE

CONVENIENCE

☆ 🖨️ ✉️ 🖨️

IMAGE
Vaccine hesitancy: Definition, scope and determinants
Vaccine.
MacDonald, Noni E.... Published August 14, 2015. Volume 33, Issue 34. Pages 4161-4164. © 2015.
Fig. 2 "Three Cs" model of vaccine hesitancy.

View in source View full size

ELSEVIER



Ilustre Colegio Oficial de Médicos de Madrid

DERECHOS

Inhabilitada una pediatra tras la denuncia presentada por Autismo España al Ilustre Colegio Oficial de Médicos de Madrid

- El organismo, tras valorar la información y recibir las alegaciones pertinentes, ha determinado una sanción disciplinaria para la profesional médica.
- La Confederación agradece la implicación del organismo y su actuación en defensa de la evidencia científica en la divulgación de contenidos sobre el TEA.

Autismo España | Madrid | 19 Jun 2019 - 12:17 CEST



Archivado en: [Autismo](#) | [derechos](#) | [pseudoterapias](#) | [malas prácticas](#)

**The College of
Physicians of Madrid
disqualified a doctor
for making public
declarations linking
vaccines with autism.**

Information to enhance transparency and quality in research

The image displays two overlapping website pages. The top page is the EQUATOR network website, featuring a navigation menu with items like Home, About us, Library, Toolkits, Courses & events, News, Blog, Librarian Network, and Contact. The main content area includes a section for 'Health Research Development Program' with a sub-header 'Because evidence-based practice starts with you' and a 'Contents' table of contents. The bottom page is the Researcher Academy landing page, which has a dark blue header with the title 'Unlock your research potential' and a 'Start learning >' button. Below the header is a horizontal flowchart with five stages: RESEARCH PREPARATION, WRITING FOR RESEARCH, PUBLICATION PROCESS, NAVIGATING PEER REVIEW, and COMMUNICATING YOUR RESEARCH. A 'Feedback' button is located on the right side of this flowchart. At the bottom, there is a 'Latest' section with three featured courses: 'CERTIFIED PEER REVIEWER COURSE' (Introduction to Certified Peer Reviewer Course, Register Now, 17 SEP), 'TECHNICAL WRITING SKILLS' (How to write for an interdisciplinary audience, 1 h), and another 'TECHNICAL WRITING SKILLS' course (An editor's guide to writing a review article, 1 h).

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Health Research Development Program

Because evidence-based practice starts with you

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Foreword

We need to work together

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Feedback

Latest

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- TECHNICAL WRITING SKILLS**
An editor's guide to writing a review article **1 h**

“We as a society, have the challenge to (...) strongly advocate the benefits of vaccination while building trust with skeptical communities through engagement rather than indoctrination”.





Saving lives in the Amazon

Lais Junqueira

The approach

- Prevention
- Early Detection
- Timely Correct Treatment

**Empowering people
with information**



The approach

**Empowering people
with current, credible,
evidence-based
information**

**Together we can
change the future**

Thank you

Ximena Alvira, MD, PhD
Budapest, September 17, 2019

