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Social media and cardiovascular medicine: *quo vadis?*

Hôpitaux Universitaires de Genève

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November 3rd 2022



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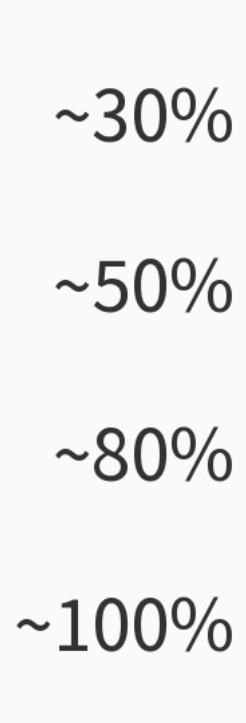
Road map

- *Status quo*
- The ESC Journals Randomised Study
- *Quo vadis?*

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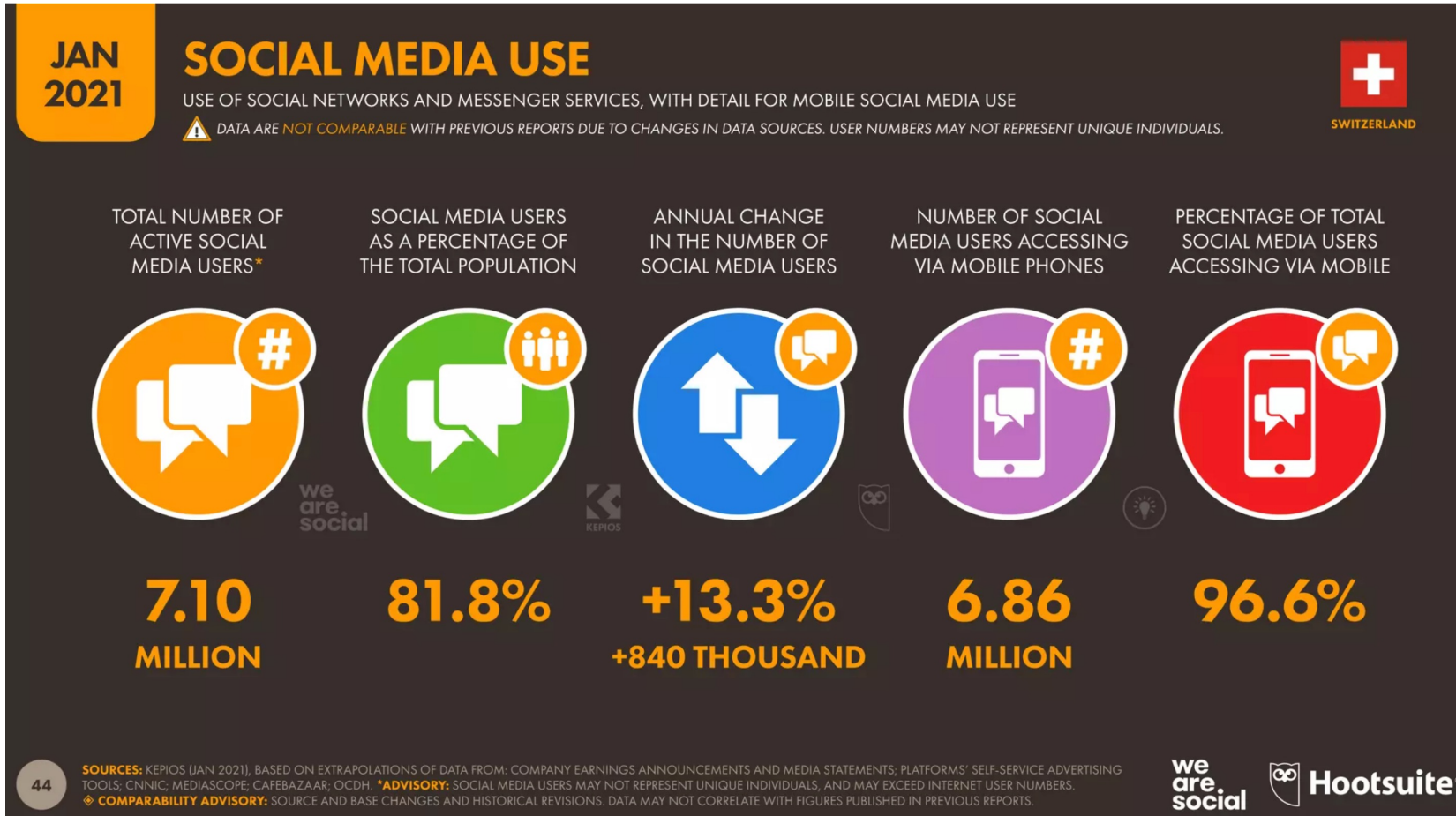
What's the proportion of the Swiss population that uses social media?



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Social media in Switzerland



The most used social media platform in Switzerland is...

Whatsapp

Twitter

Facebook

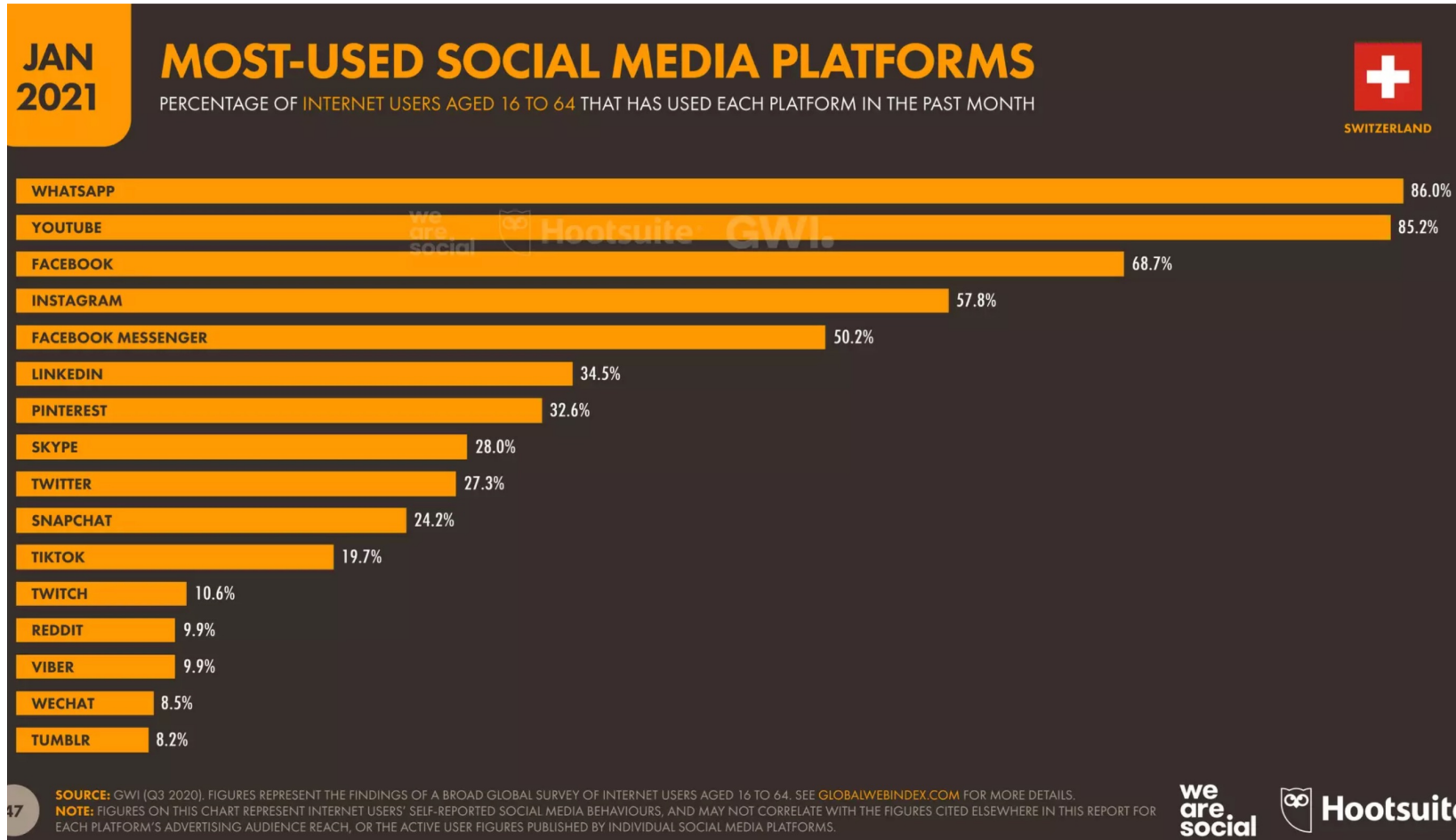
Instagram

LinkedIn

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Most used social media platforms in Switzerland



Unknown product able to:



1. Provide immediate and widespread reach;
2. Keep you up-to-date of current news and events;
3. Build your online reputation and network;
4. Offer opportunities to share data, engage in discussions and collaborate with others.



**“We don’t have a choice on
whether we **DO** social media,
the question is
how well we **DO** it.”**

– Erik Qualman

ESC Survey

Approximately 1,000 healthcare professionals

- **90%** HCPs use social media;
- **70%** for both professional and personal purposes;
- **80%** share content on social media.

ESC Survey

Approximately 1,000 healthcare professionals

- Top reason for using social media: **Learning and Education**;
- **81%** believe social media has had a positive impact in their clinical practice;
- **50%** believe social media has changed a therapeutic decision, CV prevention strategy or decision on interventional procedure

Social media in cardiovascular medicine

• 'Top Ten' most popular hashtags in cardiovascular medicine*:

#cardiotwitter
 #Stroke
 #Cardiology
 #ACCFIT
 #RadialFirst
 #CardioEd
 #AFib
 #TAVR
 #ESCCoT
 #ACCWIC

* excluding hashtags related to a specific conference, September 2018-September 2019

Twitter
 330 million users*



- Formal/informal content from scientific congresses, expert commentaries. Live-tweeting from scientific sessions using photos of slides is a popular means of dissemination
- Sharing/discussion of scientific publications, clinical cases, other useful resources

Facebook
 2.4 billion users*



- Formal/informal content from scientific events by institutions/individuals
- Sharing/discussion of scientific publications, clinical cases, other useful resources among peers

Instagram
 1 billion users*



- Informal/formal content from scientific events
- Increasing use for scientific exchange and dissemination of educational material

LinkedIn
 303 million users*



- Extension of professional brand (sharing of professional experience/career enhancement opportunities)
- Formal information from institutions/individuals

YouTube
 1.9 billion users*



- Organised repository of educational/scientific content (interviews, panel discussions) in video format

* Monthly active users (social media performance metric counting unique users who use social media platforms at least once a month)



European Heart Journal – Digital Health (2020) 1, 10–19
 doi:10.1093/ehj/ehz004

REVIEW

Social media in cardiovascular medicine: a contemporary review

Ricardo Ladeiras-Lopes^{1,2*}, Lavinia Baciu³, Julia Grapsa⁴, Afzal Sohalb^{4,5}, Rafael Vidal-Perez⁶, Allan Bohm^{7,8}, Harri Silvola⁹, Maria Rubini Gimenez^{10,11}, Saverio Muscoli¹², Markus Wallner^{13,14}, Amina Rakisheva¹⁵, Vivien Klaudia Nagy¹⁶, Martin R. Cowie¹⁷, Sarah C. Clarke¹⁸, and Stephan Achenbach¹⁹ On Behalf of the 'Cardiologists of Tomorrow', Digital Health and Media Committees of the European Society of Cardiology

My personal preference for daily use - Twitter



Twitter present vs. future

Business | Freed or caged?

Elon Musk buys Twitter at last

Now comes the hard part



Oct 28th 2022

Share



Road map

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- *Quo vadis?*

The @ESC_Journals Twitter Handle

← **European Society of Cardiology Journals** ✓
7,217 Tweets



@ESC_Journals

... | Email | Retweet | **Following**


European Society of Cardiology Journals ✓
@ESC_Journals Follows you

Official Twitter account for the most successful family of CV journals. Articles FREE for 24h from time of tweet. @escardio #cardiotwitter

Medical & Health ⓘ | Sophia Antipolis, France
escardio.org/Journals/ESC-J... | Joined September 2017

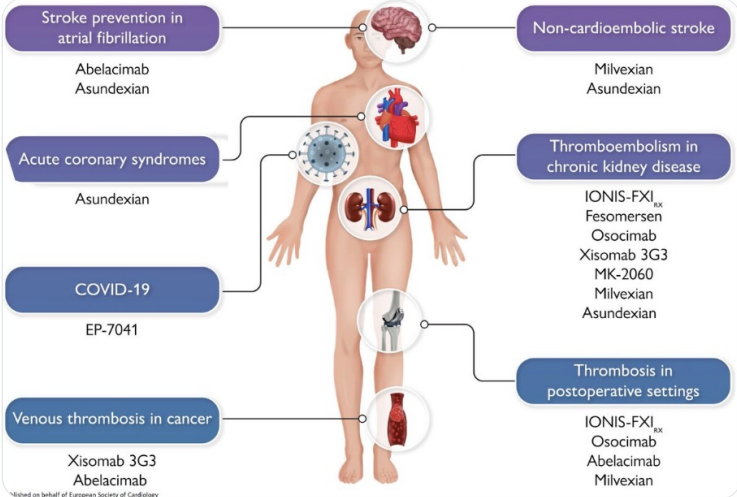
7,070 Following 79.5K Followers

Followed by Samuele Doratori, ESC President, and 752 others you follow

 **European Society of Cardiology Journ...** ✓ @ESC_Journ... · 29 Oct ...

Factor XI inhibitors: cardiovascular perspectives
academic.oup.com/eurheartj/adv...

@escardio #EHJ #ESCYoung #cardiotwitter @ehj_ed @rladeiraslopes



Condition	Drugs
Stroke prevention in atrial fibrillation	Abelacimab, Asundexian
Acute coronary syndromes	Asundexian
COVID-19	EP-7041
Venous thrombosis in cancer	Xisomab 3G3, Abelacimab
Non-cardioembolic stroke	Milvexian, Asundexian
Thromboembolism in chronic kidney disease	IONIS-FXI ^{xx} , Fesomersen, Osocimab, Xisomab 3G3, MK-2060, Milvexian, Asundexian
Thrombosis in postoperative settings	IONIS-FXI ^{xx} , Osocimab, Abelacimab, Milvexian

*Sponsored on behalf of European Society of Cardiology

40 Retweets | 105 Likes

The ESC Journals Randomised Study

Table 1 Characteristics of randomized papers

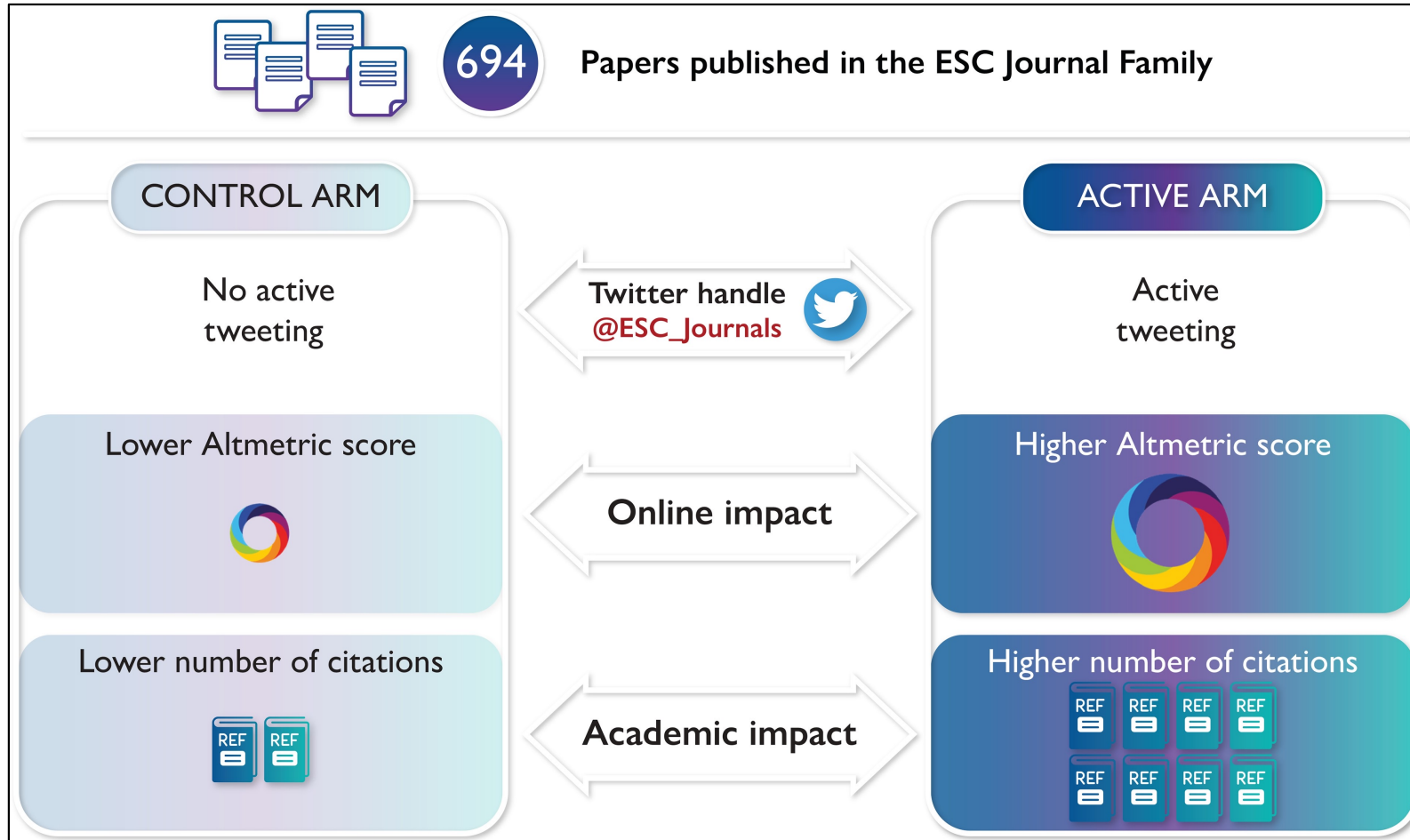
	Twitter arm N = 347	Control arm N = 347
Days since online publishing, median (IQR)	992 (938–1065)	994 (934–1063)
Corresponding author, n (%)		
EU	238 (68.6)	234 (67.4)
US	57 (16.4)	58 (16.7)
Non-EU/non-US	52 (15.0)	55 (15.9)
Type of article, n (%)		
Original	300 (86.5)	306 (88.1)
Review	36 (10.4)	28 (8.1)
Case report	10 (2.9)	10 (2.9)
Editorial	1 (0.2)	3 (0.9)

Journal, n (%)

European Heart Journal	83 (23.9)	79 (22.8)
EP Europace	50 (14.4)	51 (14.7)
EHJ—Cardiovascular Imaging	47 (13.5)	46 (13.3)
European Journal of Preventive Cardiology	37 (10.7)	37 (10.7)
European Journal of Heart Failure	27 (7.8)	27 (7.8)
EHJ—Acute Cardiovascular Care	24 (6.9)	24 (6.9)
Cardiovascular Research	23 (6.6)	24 (6.9)
ESC Heart Failure	20 (5.8)	21 (6.1)
European Journal of Cardiovascular Nursing	13 (3.8)	12 (3.5)
EHJ—Quality of Care and Clinical Outcomes	9 (2.6)	10 (2.9)
EHJ—Case Reports	8 (2.3)	8 (2.3)
EHJ—Cardiovascular Pharmacotherapy	6 (1.7)	8 (2.3)

EU, European Union; IQR, interquartile range; US, United States.

The ESC Journals Randomised Study



The ESC Journals Randomised Study

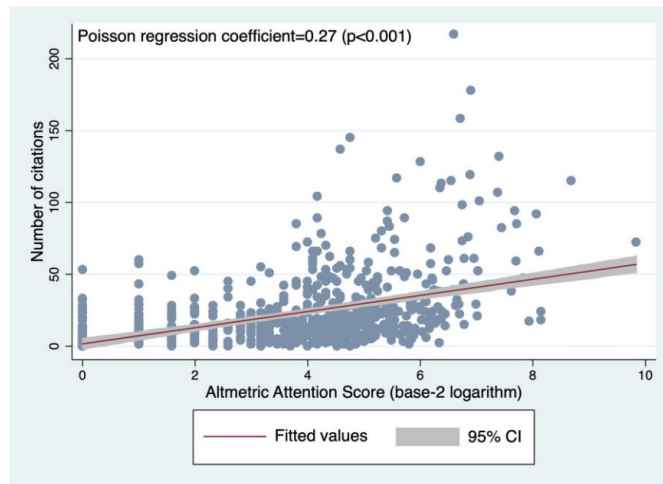


Figure 1 Scatter plot showing the association between the base-2 logarithm of Altmetric Attention Score and number of citations. The line represents the predicted values according to the linear regression model and 95% confidence intervals. Altmetric Score showed a positive correlation with the number of citations.

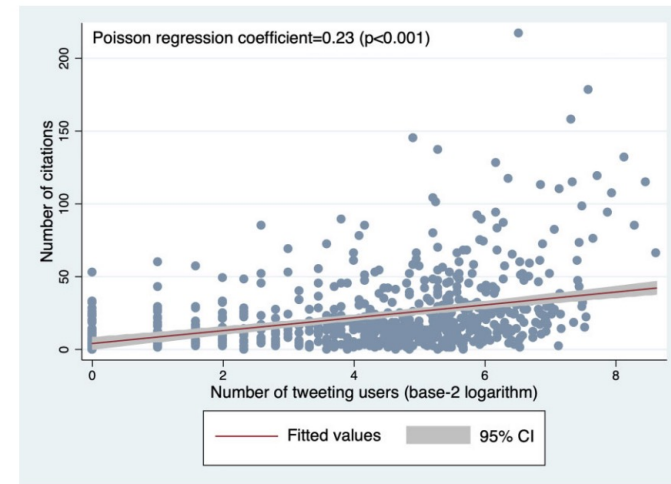


Figure 2 Scatter plot showing the association between the base-2 logarithm of the number of tweeting users and the number of citations. The line represents the predicted values according to the linear regression model and 95% confidence intervals. The number of tweeting users was a positive predictor of the number of citations.

Road map

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Social media in cardiovascular medicine



ESC

European Society
of Cardiology

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¹Cardiology Department, Gaia Hospital Centre, Vila Nova de Gaia, Portugal; ²Cardiovascular Research Centre, Faculty of Medicine, University of Porto, Porto, Portugal; ³European Society of Cardiology; ⁴Barts Heart Centre, London, UK; ⁵Barking, Havering and Redbridge University Hospitals, London, UK; ⁶Department of Cardiology, Hospital Universitario Lucus Augusti, Lugo, Spain; ⁷Department of Acute Cardiology, National Institute of Cardiovascular Diseases, Bratislava, Slovakia; ⁸Academy - Research Organization, Bratislava, Slovakia; ⁹Department of Cardiology, Oulu University Hospital, Oulu, Finland; ¹⁰Heart Centre Leipzig, Leipzig, Germany; ¹¹University Hospital of Basel, Basel, Switzerland; ¹²Department of Cardiology, Policlinico Universitario “Tor Vergata”, Rome, Italy; ¹³Lewis Katz School of Medicine, Temple University, Cardiovascular Research Center, Philadelphia, PA, USA; ¹⁴Division of Cardiology, Medical University of Graz, Graz, Austria; ¹⁵Cardiology Department, Scientific and Research Institute of Cardiology and Internal Diseases, Almaty, Kazakhstan; ¹⁶Semmelweis University Heart and Vascular Centre, Budapest, Hungary; ¹⁷Digital Health Committee of the European Society of Cardiology, Imperial College London (Royal Brompton Hospital), London, UK; ¹⁸Media Committee of the European Society of Cardiology, Royal Papworth Hospital, Cambridge, UK; and ¹⁹Department of Cardiology, Friedrich-Alexander-University Erlangen-Nürnberg, Erlangen, Germany

Received 13 September 2020; editorial decision 14 September 2020; accepted 5 November 2020

Social media in cardiovascular medicine

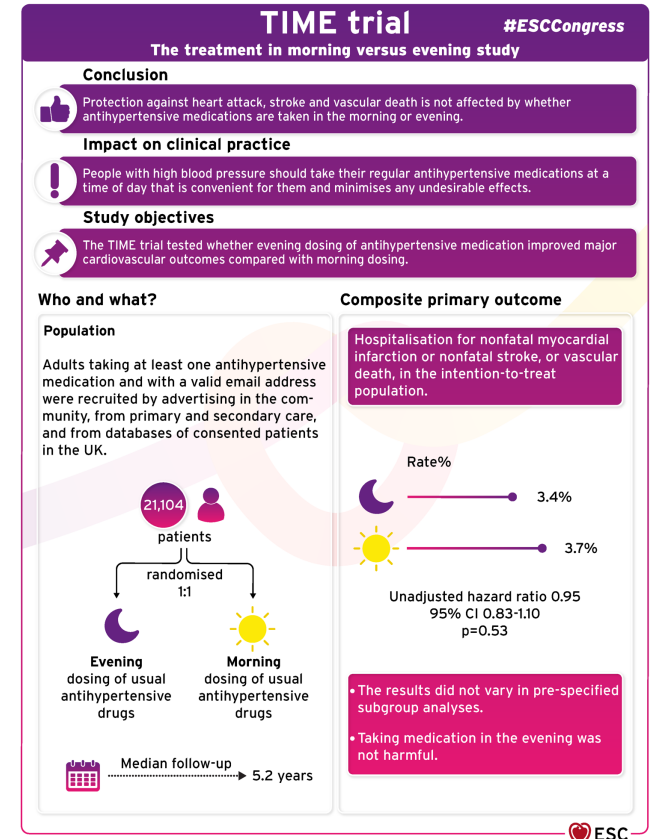
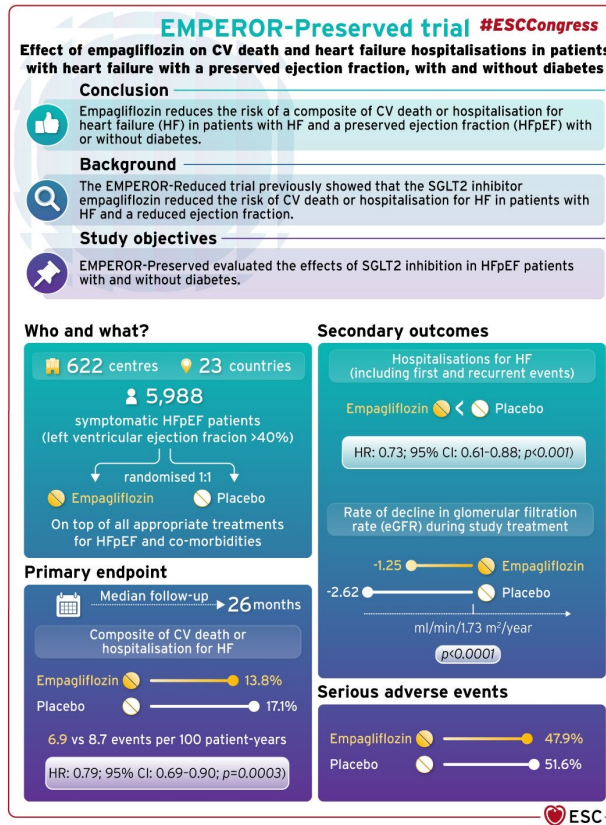
■ Strengths

- Cost, accessibility, speed
- Medical education and research dissemination
- Networking and peer discussion
- Public and patient engagement

Social media strengths



ESC Congress 2021



ESC Congress 2022

Social media strengths

ESC European Heart Journal (2022) 00, 1–13
 European Society of Cardiology <https://doi.org/10.1093/eurheartj/ehac464>

STATE OF THE ART REVIEW
 Thrombosis and antithrombotic treatment

Factor XI inhibitors: cardiovascular perspectives

Raffaele De Caterina^{1*}, Domenico Prisco², and John W. Eikelboom³

¹Chair of Cardiology, University of Pisa and Division of Cardiology, Pisa University Hospital, Pisa, Italy; ²Chair of Internal Medicine, Department of Experimental and Clinical Medicine, University of Florence and Careggi University Hospital, Florence, Italy; and ³Population Health Research Institute, McMaster University and Hamilton Health Sciences, Hamilton, Ontario, Canada

Received 17 May 2022, revised 15 July 2022, accepted 11 August 2022

Graphical Abstract

Possible forthcoming therapeutic indications for FXI/XIIa inhibitors.

European Society of Cardiology Journals
 @ESC_Journals

Factor XI inhibitors: cardiovascular perspectives
academic.oup.com/eurheartj/advance-article-abstract/doi/10.1093/eurheartj/ehac464

@escardio #EHJ #ESCYoung #cardiotwitter @ehj_ed @rladeiraslopes

7:00 am · 29 Oct 2022 · Meltwater Social

37 Retweets 4 Quote Tweets 108 Likes

Social media in cardiovascular medicine

■ Weaknesses

- Inaccurate or biased information
- Privacy concerns and the “filter bubble”
- Breach of confidentiality
- Patient-physician relationship
- Non-professionalism and problematic social media use

Social media weaknesses

Science

Lies spread faster than the truth

There is worldwide concern over false news and the possibility that it can influence political, economic, and social well-being. To understand how false news spreads, Vosoughi *et al.* used a data set of rumor cascades on Twitter from 2006 to 2017. About 126,000 rumors were spread by ~3 million people. False news reached more people than the truth; the top 1% of false news cascades diffused to between 1000 and 100,000 people, whereas the truth rarely diffused to more than 1000 people. Falsehood also diffused faster than the truth. The degree of novelty and the emotional reactions of recipients may be responsible for the differences observed.

Social media weaknesses

Circulation

Volume 139, Issue 5, 29 January 2019; Pages 571-572
<https://doi.org/10.1161/CIRCULATIONAHA.118.039193>



EDITORIAL

Medical Misinformation

Vet the Message!

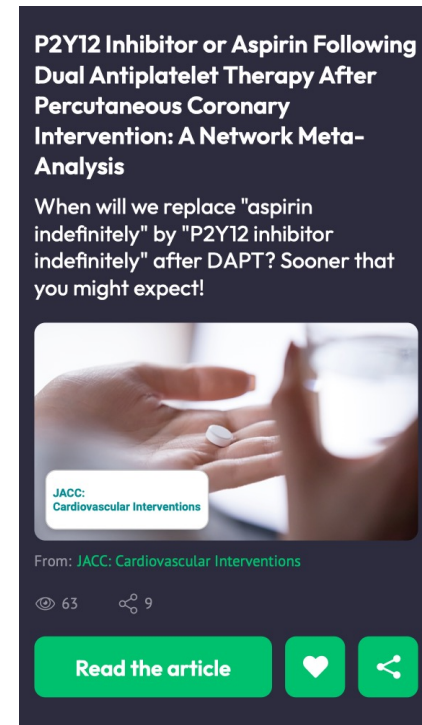
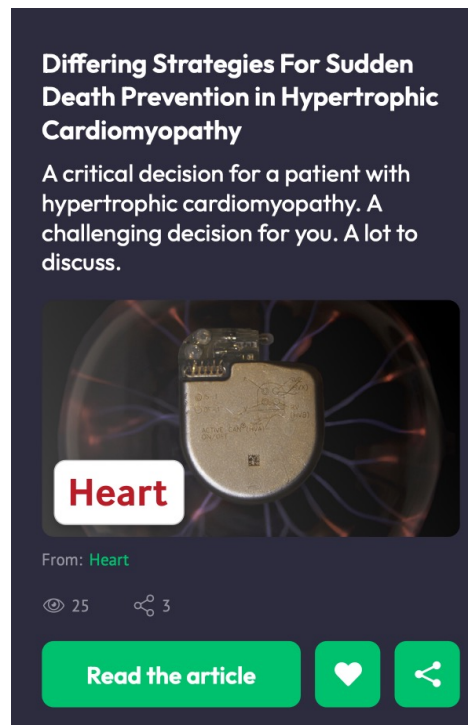
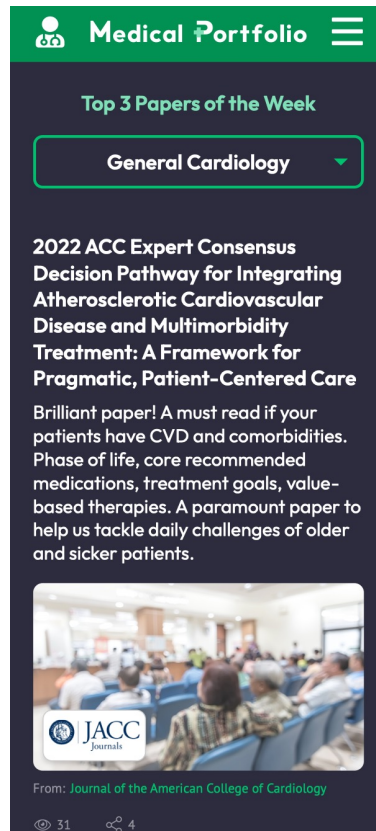
Joseph A. Hill, MD, PhD, Stefan Agewall, MD, PhD, Adrian Branchuk, MD, George W. Booz, PhD, Jeffrey S. Borer, MD, Paolo G. Camici, MD, Peng-Sheng Chen, MD, Anna F. Dominiczak, DBE, MD, Çetin Erol, MD, PhD, Cindy L. Grines, MD, Robert Gropler, MD, Tomasz J. Guzik, MD, PhD, Markus K. Heinemann, MD, PhD, Ami E. Iskandrian, MD, Bradley P. Knight, MD, Barry London, MD, PhD, Thomas F. Lüscher, MD, Marco Metra, MD, Kiran Musunuru, MD, PhD, MPH, Brahmajee K. Nallamothu, MD, MPH, Andrea Natale, MD, Sanjeev Saksena, MD, Michael H. Picard, MD, Sunil V. Rao, MD, Willem J. Remme, MD, PhD, Robert S. Rosenson, MD, Nancy K. Sweitzer, MD, PhD, Adam Timmis, MD, and Christiaan Vrints, MD, PhD

Without exaggeration, significant harm, to society and individuals, derives from the wanton spread of medical misinformation. It is high time that this stop, and we lay at the feet of the purveyors of internet and social media content the responsibility to fix this.

Take-home messages

- Social media is a **powerful ally to cardiovascular healthcare professionals**.
- **Social media literacy** is mandatory.
- We play an **active role** in optimizing the role of social media in cardiovascular medicine.

It's not only about social media...don't forget the apps!



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