

Tweeting their Own Horns

Impact of Authors Tweeting on the Dissemination of Research Publications

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Conflicts of Interest

- I have no actual or potential conflicts of interest in relation to the contents of this presentation





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Area of Expertise*

Select 1 to 10.

Add to List

acute coronary syndrome
cardiac magnetic resonance imaging
sudden cardiac death
systematic review
acute cardiac care
acute myocardial infarction
cardiac arrhythmia
ventricular arrhythmia
antiplatelet therapy
late gadolinium enhancement

Remove

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Other Expertise Areas

meta-analysis
atrial fibrosis
ventricular scar
atrial myopathy

Enter terms in the fields above that you do not feel were available in the Area of Expertise section to appropriately identify your specialties.



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Current Stage	Review Complete - Decision Processed
Title	A Man in His 50's with Aortic and Mitral Valve Endocarditis
Manuscript Type	Cardiovascular Images
Theme Issue	N/A
Corresponding Author	Hourmazd Haghbayan (London Health Sciences Centre)
Coauthors	Hourmazd Haghbayan (corr_auth) , Eric Coomes
Abstract	
Tweet	In this patient with S. mitis bacteremia, what is the most likely mechanism that led to developing mitral valve vegetations? #EchoFirst #CardioTwitter



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**Active on Twitter? Put your time to
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Here's how to claim MOC credits and build your community in five steps:

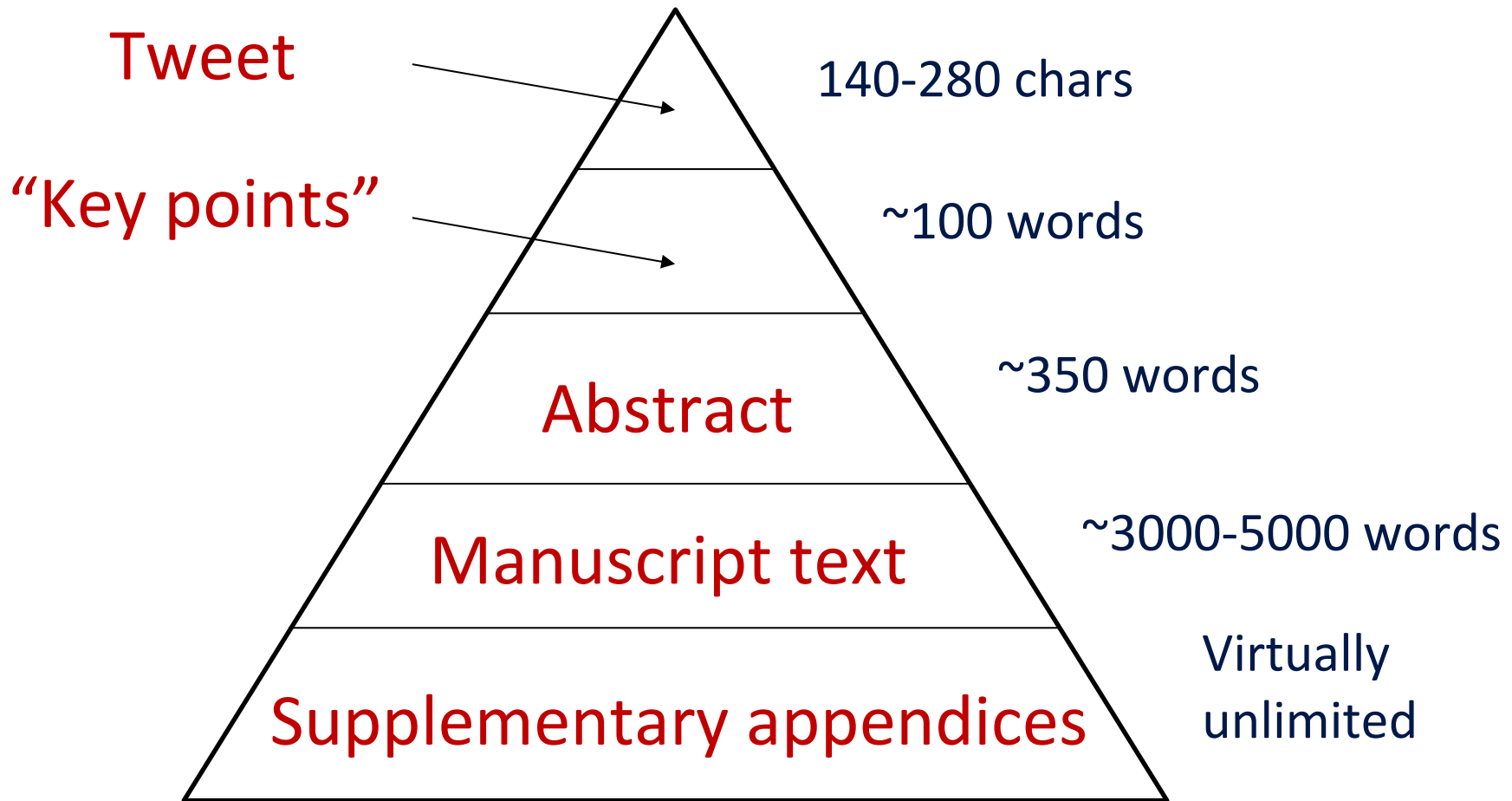
1. Identify a discussion topic that would be meaningful to your network. Include a published paper or article that can be shared ahead of time to participants.
2. Promote the Twitter chat to your community and **ensure it meets Royal College CPD accreditation standards** so you can include that they can receive a MOC credit.
3. Be prepared for a wide variety of viewpoints as the discussion evolves.
4. Capture notes for your own learnings and/or for sharing with peers at a future opportunity.
5. Claim your MOC credits.



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Royal College of Physicians and Surgeons of Canada website.
<https://newsroom.royalcollege.ca/active-on-twitter-put-your-time-to-good-use-and-claim-moc-credits/>

Continuum of article abbreviation



Background

- Social media has revolutionized medical and scientific communication
- Rapidly (<5-10yrs) adopted as a novel platform for the **exchange of knowledge** between clinicians/researchers
- Twitter in particular serves as a platform for **mass dissemination of small bundles of information** given the public nature of most posts
- Increasingly, journals **require** scientists to provide or issue tweets to accompany new publications
- The incentive for researchers to disseminate their work is clear, but their **capacity to actually impact its uptake is unknown**



Objective

- Determine whether authors tweeting out their own articles impacts their uptake in the form of:
 - Downstream tweets
 - Downstream citations
- Determine the optimal timing, if any, for authors to issue such tweets in order to maximize reach



Methods

- Focus on the field of Pulmonary and Critical Care Medicine
- List of journals and their 2017 Impact Factors acquired from InCites Journal Citation Reports tool (Clarivate Analytics, 2018)
- Dataset of tweets provided by Altmetric.com from June 2011 to Jan 2017 was linked to downstream citations from the Web of Science database (Clarivate Analytics, 2018)



Methods

- Articles with at least 1 tweet identified and author-tweeted vs non-author tweeted articles compared for:
 - Total tweets at 1 yr post publication
 - Number citations at 1 yr post publication
 - Total citation count by end of study follow-up (Dec 2018)



Results

- 84 pulmonary and critical care journals identified
- Total of 15,078 articles with complete tweet and citation data

2017 Impact Factor (IF)*	Number of journals (number of articles)	Mean tweets at one-year				Mean citations in the first calendar-year				Mean total citations as of December 2018			
		Non- author tweeted	Author tweeted	Fold change	P-value	Non- author tweeted	Author tweeted	Fold change	P-value	Non- author tweeted	Author tweeted	Fold change	P- value
Overall	84 journals (15078)	5.42 (5.26- 5.59)	16.71 (14.67- 18.97)	3.08 (2.69- 3.51)	<0.0001	2.17 (2.12- 2.22)	3.05 (2.72- 3.40)	1.41 (1.25- 1.58)	<0.0001	21.97 (21.25- 22.80)	33.16 (29.12- 37.84)	1.51 (1.32- 1.72)	0.0001



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≥ 5 (high)	12 journals (6607)	8.10 (7.77-8.45)	21.94 (18.84-25.35)	2.71 (2.32-3.14)	<0.0001	2.84 (2.74-2.95)	3.79 (3.31-4.33)	1.34 (1.16-1.53)	0.0008	32.47 (30.89-34.31)	44.33 (38.22-51.35)	1.37 (1.17-1.59)	0.008
≥2 and <5 (moderate)	49 journals (7052)	3.61 (3.50-3.72)	7.96 (6.65-9.41)	2.21 (1.83-2.62)	<0.0001	1.77 (1.72-1.81)	1.87 (1.61-2.16)	1.06 (0.91-1.22)	0.5	15.13 (14.65-15.64)	15.07 (13.30-17.02)	1.00 (0.88-1.13)	1
< 2 (low)	23 journals (1419)	2.39 (2.20-2.59)	7.93 (4.57-13.17)	3.33 (1.87-5.45)	<0.0001	1.15 (1.07-1.23)	1.43 (1.00-1.90)	1.25 (0.87-1.67)	0.4	8.72 (8.17-9.32)	10.07 (6.93-13.87)	1.15 (0.78-1.59)	0.5



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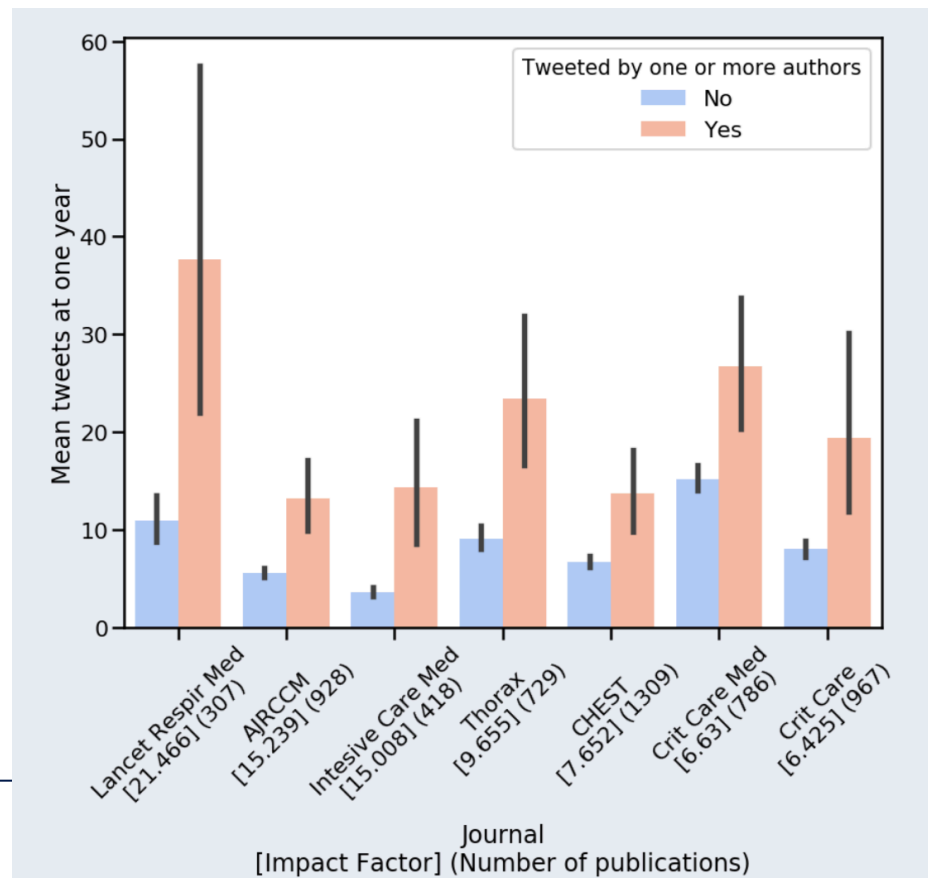
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- Total of 15,078 articles with complete tweet and citation data
- 3.08-fold (95%CI 2.69-3.51, $p < 0.0001$) increase in **downstream tweets**
- 1.41-fold (95%CI 1.25-1.58, $p < 0.0001$) increase in **citations**
- 1.51-fold (95%CI 1.32-1.72, $p = 0.0001$) increase in **total citations**
- **Effect on citations confined to high-impact journals on sub-group analysis**



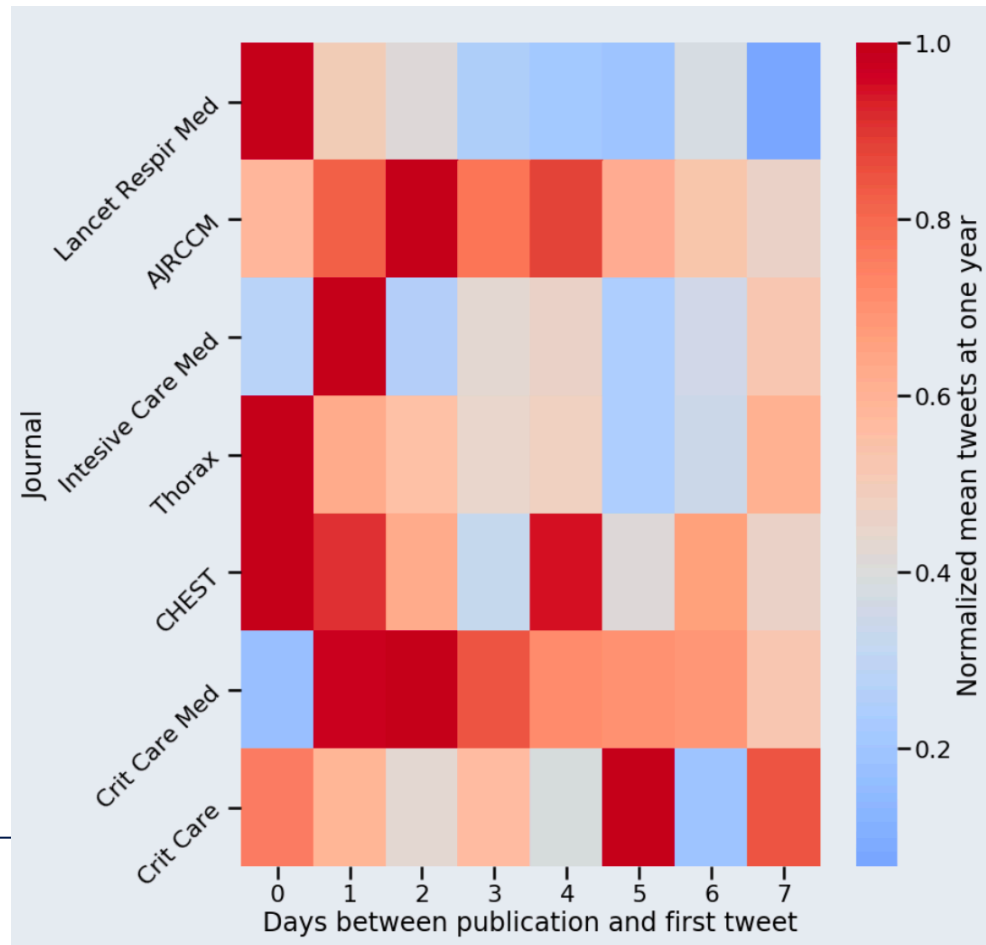
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- Looking deeper at the journal-level with the 7 top pulmonary and critical care journals (total of 5,373 articles)

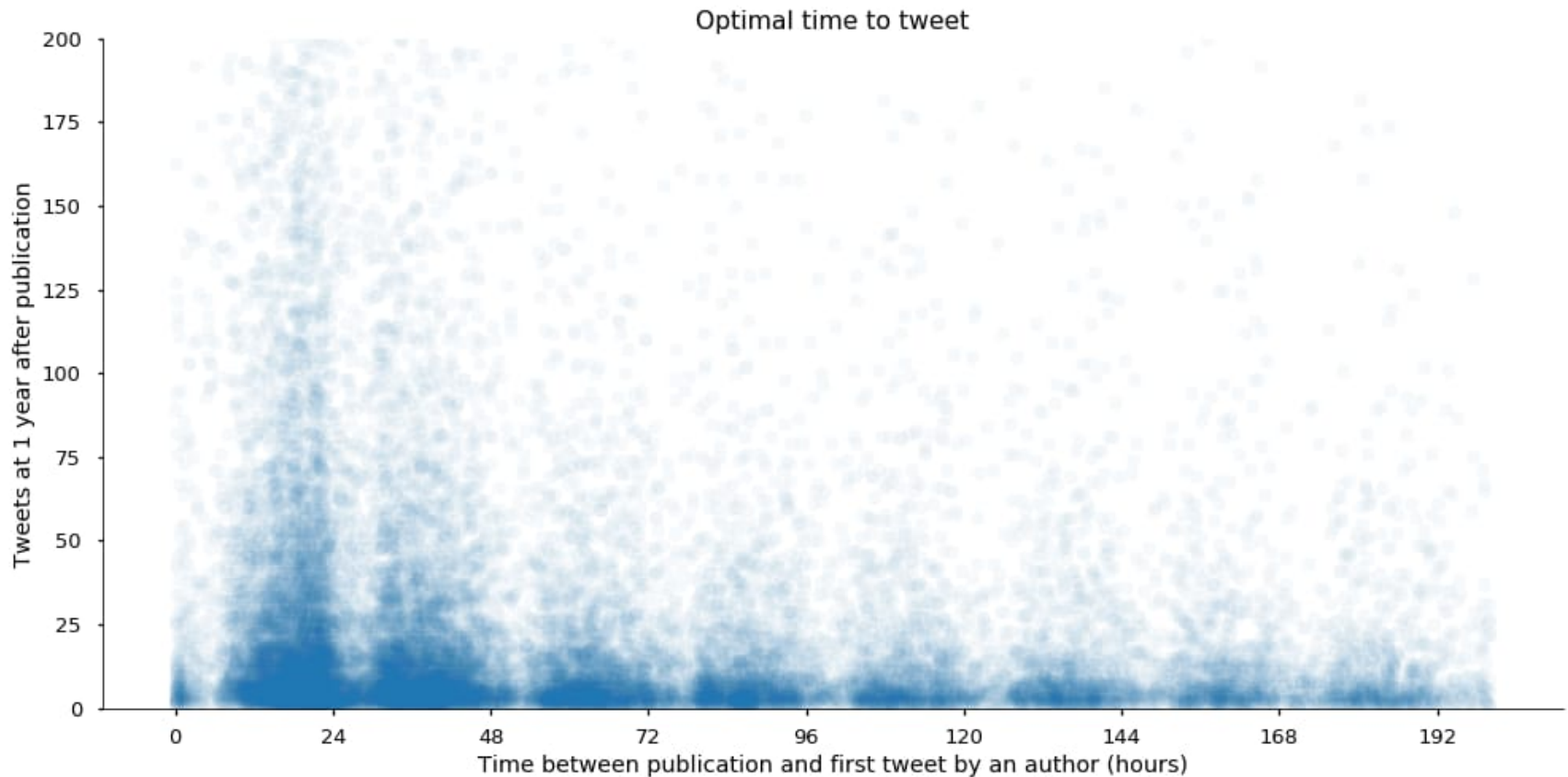


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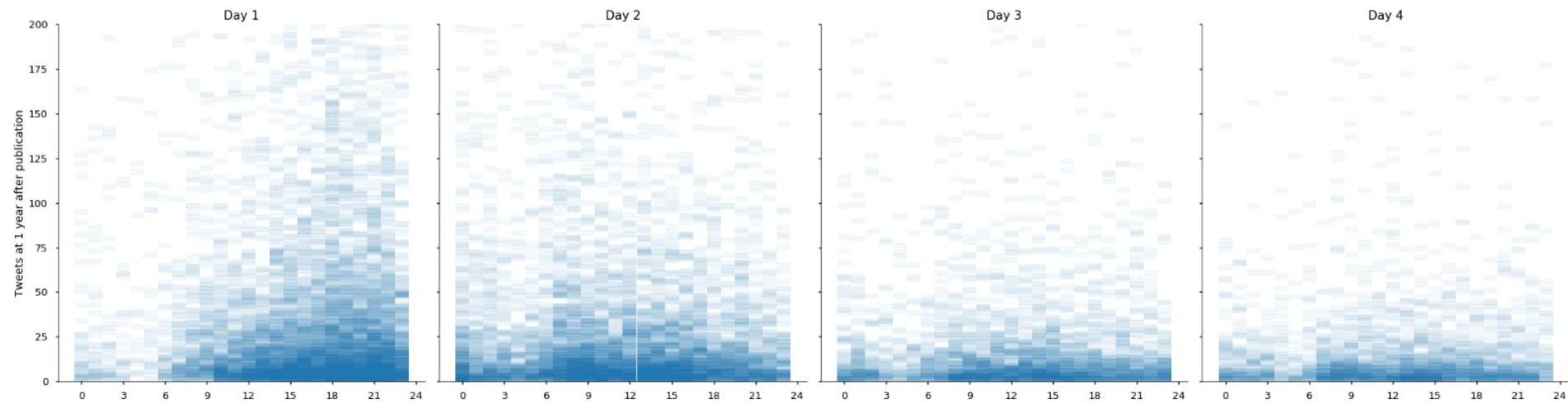
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Work in progress...



Work in progress...



Conclusions

- Articles tweeted by their own authors achieve **significantly greater** number of **posts on Twitter** at one year and **overall downstream citations**
- This author-boost effect on citations **may be confined to high-impact journals only**, and should be investigated further
- Publications with the greatest mean tweets at one year were generally **first tweeted on days 0-2 after publication**, but this appears **journal-dependant**
- **Further research** is required to delineate **optimal day and time post publication** for authors to issue tweets




References


- Specific references cited within individual slides



Thank you

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