Cochrane Database of Systematic Reviews

2018 Impact Report

The Impact Report presents information on different measures of 'impact' and aims to support the Cochrane Networks and Cochrane Review Groups with publication strategies and prioritisation.

The report focuses on Journal Impact Factor, usage and alternative metrics including guidelines. The data and respective analysis may evolve in future reports.

" We want to continue to work with our groups and networks to improve the way we measure the impact of Cochrane Reviews and this document intends to support their activities. We welcome feedback on how we can make it more useful "

Karla Soares-Weiser
Editor-in-Chief, Cochrane Library

**Trusted evidence.
Informed decisions.
Better health.**
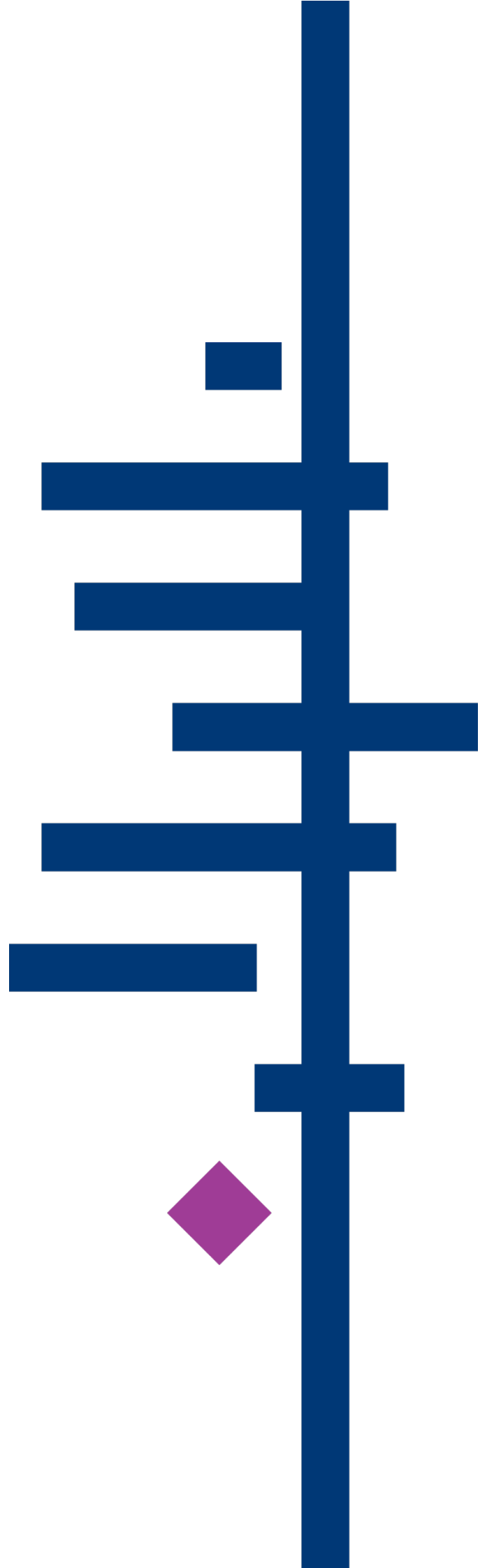
1. The Journal Impact Factor of the Cochrane Database of Systematic Reviews (CDSR)

Each year in June, Clarivate Analytics publish the Journal Impact Factors of all journals indexed in the Journal Citation Report. The 2018 Journal Impact Factor for the *CDSR* is **7.755**, which describes the ratio of the number of citations in 2018 of reviews published in 2016 and 2017 to the number of reviews published in 2016 and 2017 (see calculation below).

Cites in 2018 to reviews published in 2016 and 2017 (in-window citations)	2017 = 5143 2016 = 6963	Number of reviews published in 2016 and 2017 (in-window citable items)	2017 = 747 2016 = 814

CDSR Journal Impact Factor calculation 2018:

$$\frac{\text{In-window citations}}{\text{In-window citable items}} = \frac{12{,}106}{1{,}561} = \mathbf{7.755}$$

A *CDSR* review published in 2016 or 2017 was cited, on average, 7.755 times in 2018

When considering the citation data presented below, please be aware of the following:

- The data used to generate Impact Factors for individual Cochrane Review Groups (CRG) was extracted from the Clarivate Analytics Web of Science[1]. All Journal Impact Factors (including the Journal Impact Factor of the *CDSR*) are published in the Journal Citation Reports (JCR). The data used to calculate Journal Impact Factors are not made publicly available. Individual CRG Impact Factor data, therefore, should not be quoted as 'official', but can be used internally.

- Cites for individual Cochrane Reviews are allocated by a process of hand-matching. Each year a proportion of cites cannot be matched to citable items due to citing errors such as an omission of the version number or suffix from the DOI. The accuracy of the source data provided by Clarivate Analytics also has an impact on the success rate of the citation matching. The table below shows the percentage of cites that were successfully matched.

- All reviews that have a new citation record (excluding withdrawn reviews) are included in the *CDSR* Impact Factor calculation. Protocols and Editorials are not included.

Impact Factor Year	Cites received*	Cites matched	% matched cites
2018	12,106	10,844	90%
2017	11,914	11,249	94%
2016	11,520	9,885	86%
2015	11,522	9,397	82%
2014	11,932	11,720	98%
2013	9,859	8,515	86%
2012	8,087	6,411	79%
2011	7,721	6,685	87%

*Source – Journal Citation Reports

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[1] Other citation databases such as *CrossRef* (which informs the 'cited by' feature on Cochrane Reviews) capture cites for Cochrane Reviews, but those data are not included here. Citation counts will differ between databases.

The ten most cited reviews published in the *CDSR* that contributed to the 2018 Journal Impact Factor were:

Times Cited	Title	Authors	CD Number	Review Group	Publication Date*
119	Decision aids for people facing health treatment or screening decisions	Stacey D, Légaré F, Lewis K, Barry MJ, Bennett CL, Eden KB, Holmes-Rovner M, Llewellyn-Thomas H, Lyddiatt A, Thomson R, Trevena L, Lyddiatt A	CD001431.pub5	Consumers and Communication Group	Apr-2017
96	Electronic cigarettes for smoking cessation	Hartmann-Boyce J, McRobbie H, Bullen C, Begh R, Stead LF, Hajek P	CD010216.pub3	Tobacco Addiction Group	Sept-2016
89	Antenatal corticosteroids for accelerating fetal lung maturation for women at risk of preterm birth	Roberts D, Brown J, Medley N, Dalziel SR	CD004454.pub3	Pregnancy and Childbirth Group	Mar-2017
69	Exercise-based cardiac rehabilitation for coronary heart disease	Anderson L, Thompson DR, Oldridge N, Zwisler A-D, Rees K, Martin N, Taylor RS	CD001800.pub3	Heart Group	Jan-2016
62	Ataluren and similar compounds (specific therapies for premature termination codon class I mutations) for cystic fibrosis	Aslam AA, Higgins C, Sinha IP, Southern KW	CD012040.pub2	Cystic Fibrosis and Genetic Disorders Group	Jan-2017
58	Vitamin D supplementation for women during pregnancy	De-Regil LM, Palacios C, Lombardo LK, Peña-Rosas JP	CD008873.pub3	Pregnancy and Childbirth Group	Jan-2016
57	Mobile phone text message and app-based interventions for smoking cessation	Whittaker R, McRobbie H, Bullen C, Rodgers A, Gu Y	CD006611.pub4	Tobacco Addiction Group	Apr-2016
49	Combined pharmacotherapy and behavioural interventions for smoking cessation	Stead LF, Koilpillai P, Fanshawe TR, Lancaster T	CD008286.pub3	Tobacco Addiction Group	Mar-2016
48	Early skin-to-skin contact for mothers and their healthy newborn infants	Moore ER, Bergman N, Anderson GC, Medley N	CD003519.pub4	Pregnancy and Childbirth Group	Oct-2016
48	Transfusion thresholds and other strategies for guiding allogeneic red blood cell transfusion	Carson JL, Stanworth SJ, Roubinian N, Fergusson DA, Triulzi D, Doree C, Hebert PC	CD002042.pub4	Injuries Group	Nov-2016

*The Journal Impact Factor is calculated using data from the two previous years (for 2018, the data concerns articles published in 2016 and 2017). For the 2019 Journal Impact Factor, reviews published in 2017 and 2018 will be included and 2016 reviews will drop out of the window. It is worth noting that, depending on publication time, some reviews will have longer to collect citations than others i.e. an article published in January will have two full years to collect cites.

The *CDSR* is ranked 11 of 160 journals in the 'Medicine, General and Internal' category, placing it in the top five percent of all titles listed in the Journal Citation Report:

2018 Rank	Journal name	Journal Impact Factor	In-window citations	In-window citable items	In-window reviews published	5-Year Impact Factor	% Reviews uncited*	Self-citation rate	IF w/o self-citations	Citable items 2018
1	NEW ENGLAND JOURNAL OF MEDICINE	70.670	46,289	655	98	70.331	2%	1%	69.988	321
2	LANCET	59.102	37,766	639	131	54.664	0%	2.2%	57.829	264
3	JAMA-JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION	51.273	21,586	421	80	46.312	0%	2.2%	50.135	212
4	Nature Reviews Disease Primers	32.274	3,066	95	0	31.366	0%	0.4%	32.147	43
5	BMJ-British Medical Journal	27.604	9,965	361	87	24.546	2.3%	6.1%	25.928	167
6	JAMA Internal Medicine	20.768	5,545	267	31	19.276	6.5%	3.6%	20.015	124
7	ANNALS OF INTERNAL MEDICINE	19.315	5,389	279	76	19.676	1.3%	4.4%	18.466	128
8	PLOS MEDICINE	11.048	4,342	393	18	14.814	0%	1.4%	10.893	182
9	Journal of Cachexia Sarcopenia and Muscle	10.754	1,441	134	16	9.374	0%	26.9%	7.858	90
10	BMC Medicine	8.285	2,941	355	70	9.438	0%	1.5%	8.163	228
11	**Cochrane Database of Systematic Reviews**	**7.755**	**12,106**	**1,561**	**1,561**	**7.949**	**22.6%**	**5.2%**	**7.350**	**644**

*Retrieved July 2019

Ranking: The 2018 *CDSR* Journal Impact Factor of 7.755 is an improvement on the previous year's Journal Impact Factor of 6.754. *CDSR* has jumped one place in the ranking from 12th to 11th.

In-window citations: The *CDSR* received the fourth highest number of citations in 2018 to papers published in 2016 and 2017.

In-window citable items: The *CDSR* published considerably more citable items (in 2016 and 2017) than any of the higher ranked journals. Please note that for other journals, this may include article types other than reviews such as original articles or research papers.

Uncited items: 22.6% of Cochrane Reviews were not cited in this Journal Impact Factor window compared with 30% in the previous window.

Citable items 2018: The table above shows that the *CDSR* published a much higher number of citable items in 2018 compared to the other high-ranking journals in the category. On average, 176 citable items were published by the other journals ranked higher than the *CDSR*, compared with 644 citable items published within the *CDSR*.

CDSR citation metric trends

The table below shows trends from year to year for the *CDSR* with additional context about comparisons with other journals.

The 5-Year Impact Factor was 7.949. This is calculated by taking the number of cites in 2018 to items published between 2013 and 2017 (34,991) and dividing this by the number of items published between 2013 and 2017 (4,402).

In 2018, the *CDSR* received a total of 67,607 cites to all reviews available (published anytime). The only journals in the 'Medicine, General and Internal' category to receive more cites than the *CDSR* were *NEJM* (344,581), *Lancet* (247,292), *JAMA* (156,350) *and BMJ* (112,910). These are ranked by Journal Impact Factor as 1st, 2nd, 3rd and 5th respectively.

Year	Ranking	Impact Factor	In-Window Cites	In-window citable items	Total Cites	Self-citation rate	IF w/o self-citations	5-Year Impact Factor
2018	**11**	**7.755**	**12,106**	**1,561**	**67,607**	**5%**	**7.350**	**7.949**
2017	12	6.754	11,914	1,764	62,332	7%	6.311	7.669
2016	14	6.264	11,520	1,839	57,740	5%	5.931	7.084
2015	12	6.103	11,522	1,888	47,899	5%	5.748	6.665
2014	13	6.035	11,932	1,977	43,592	5%	5.693	6.539
2013	10	5.939	9,859	1,660	39,856	8%	5.433	6.706
2012	12	5.785	8,087	1,398	34,230	8%	5.288	6.553
2011	10	5.912	7,721	1,306	29,593	5%	5.630	6.309
2010	10	6.186	6,978	1,128	27,366	7%	5.784	6.346
2009	11	5.653	6,574	1,163	23,102	6%	5.305	-

The number of reviews published in the *CDSR* in 2017 was 8% lower than in 2016 (747 v 814). For 2018, the *CDSR* published the third highest number of citable items of the journals in the Medicine, General & Internal category. The top 5 journals in terms of number of citable items were:

Journal Title	Citable items 2018	Impact Factor 2018	Impact Factor rank in category
MEDICINE	4,188	1.870	69
BMJ Open	2,510	2.376	50
Cochrane Database of Systematic Reviews	**644**	**7.755**	**11**
INTERNAL MEDICINE	568	0.956	116
JOURNAL OF CLINICAL MEDICINE	560	5.688	15

The *CDSR* has a comparatively high Journal Impact Factor compared with journals with a high number of citable items.

2.   The Impact Factors of individual Networks:

The table below shows the unofficial Impact Factors for each Network. These have been calculated using a similar calculation used to produce the overall *CDSR* Journal Impact Factor – dividing the number of citations received in 2018 to reviews published in 2016 and 2017 (by each CRG in the Network) by the number of reviews published in 2016 and 2017 (by each CRG in the Network). It is important to remember that these figures have been calculated using hand-matched data from Web of Science and are not 'official' Impact Factors. This is the first time we have been able to report unofficial Impact Factors for Networks and this may develop in future reports.

Network	In-Window Cites	In-window citable items	Impact Factor
Cochrane Abdomen and Endocrine	1,021	153	6.673
Cochrane Acute and Emergency Care	931	125	7.448
Cochrane Cancer	593	103	5.757
Cochrane Children and Families	2,400	380	6.316
Cochrane Circulation and Breathing	1,475	205	7.195
Cochrane Mental Health and Neuroscience	1,223	198	6.177
Cochrane Musculoskeletal, Oral, Skin and Sensory	1,764	274	6.438
Cochrane Public Health and Health Systems	1,373	115	11.939

3.   The Impact Factors of individual Cochrane Review Groups (CRGs):

Figure 1 shows the 2018 CRG Impact Factors for each CRG. Figure 2 shows the number of publications and citations contributing to the 2018 Impact Factors for each CRG as a percentage of the *CDSR*. It is important to remember that these figures have been calculated using hand-matched data from Web of Science and are not 'official' Impact Factors. The comparison is just for information and should not be used as a measure of 'success' regarding other CRGs.

Figure 1: 'Impact Factor' for each CRG (i.e. number of cites in 2018 to reviews published in 2016–2017, divided by the number of reviews published in 2016–2017)
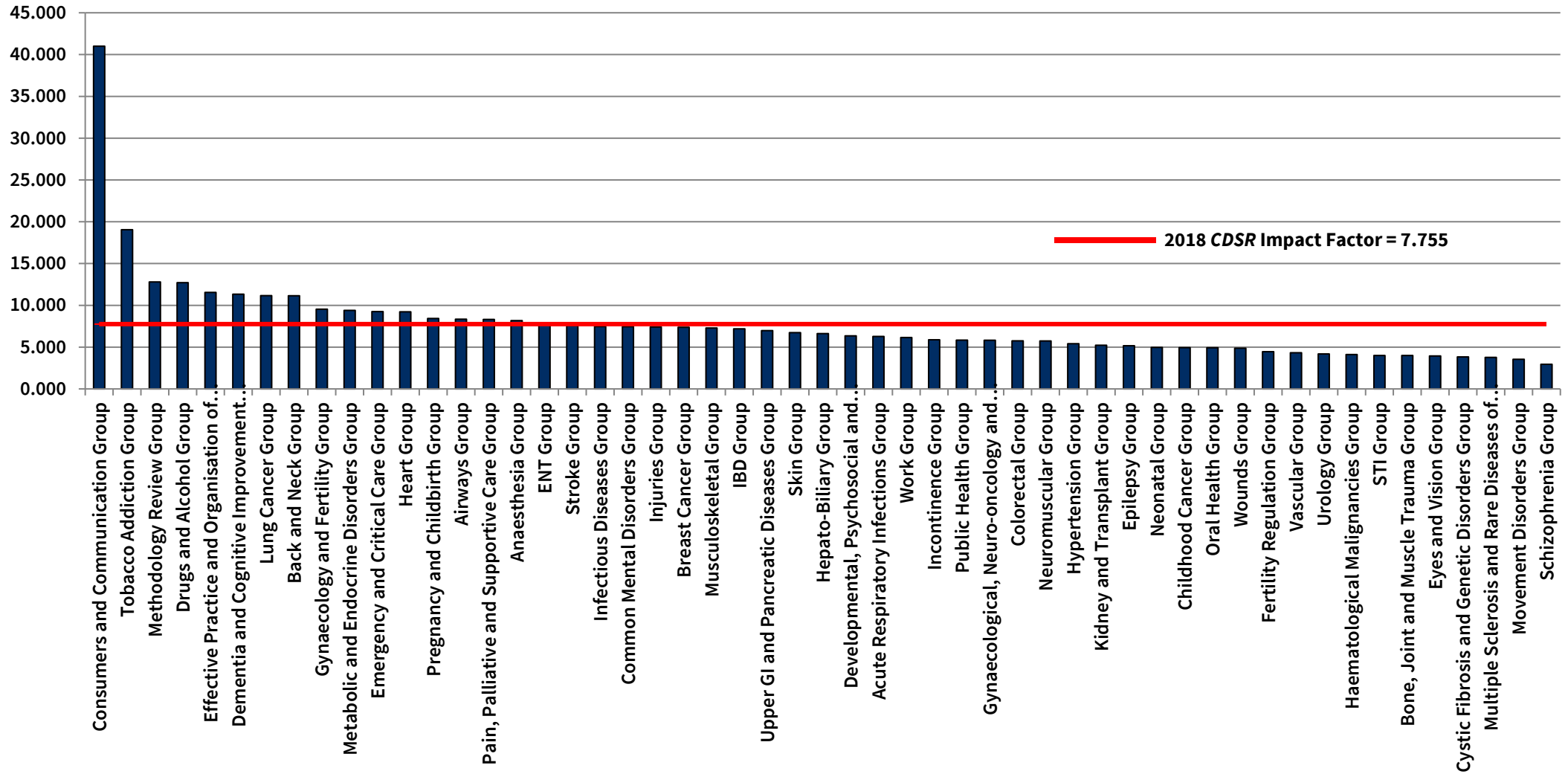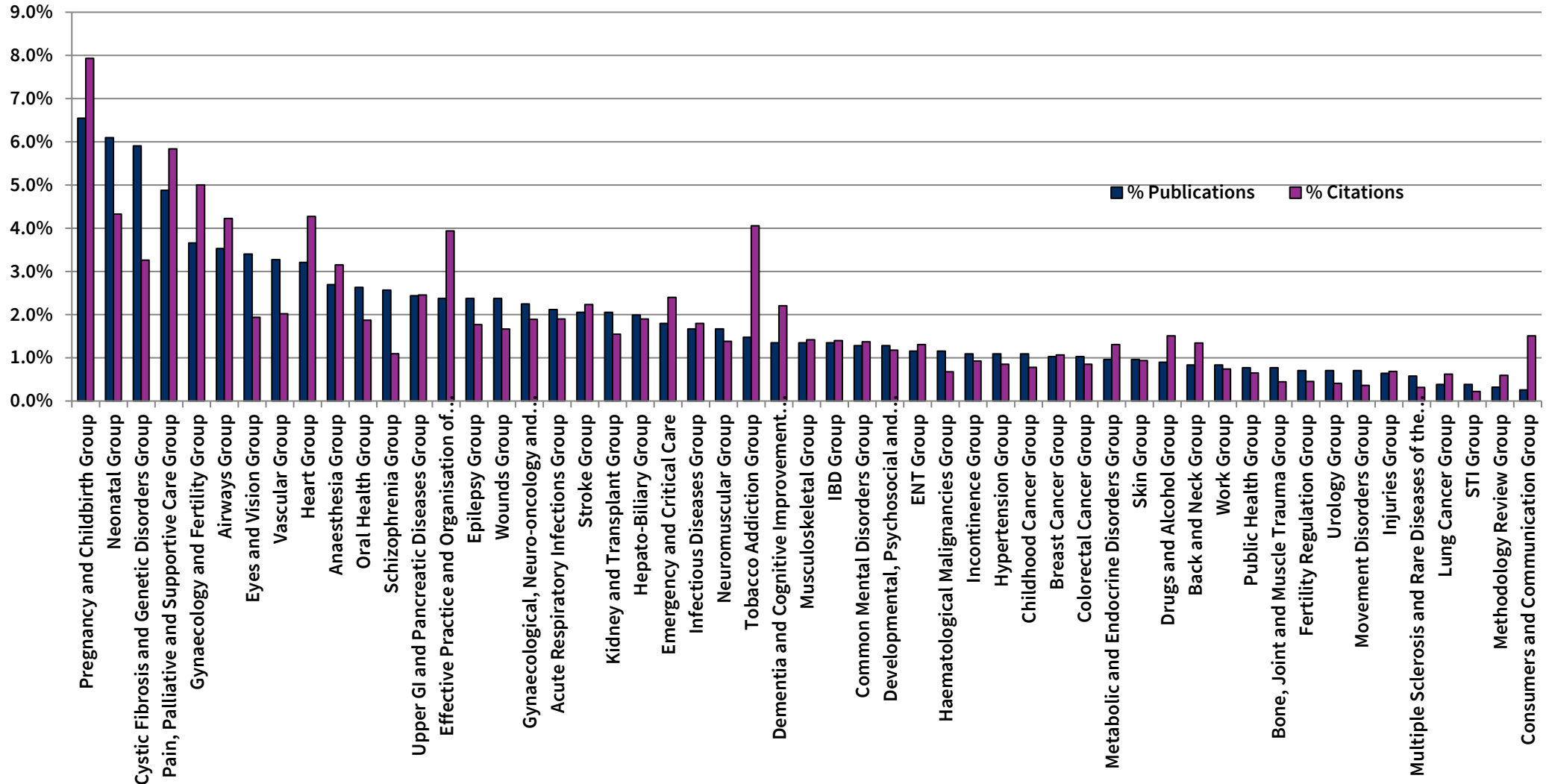
Figure 2: % Publications (blue) and % Citations (purple) of *CDSR* for each CRG (in order of percentage of publications)

4.   How the citation data compare with Cochrane Library usage data:

When considering the usage data presented below, please be aware of the following:

- A proportion of full text accesses (HTML + PDF) cannot be associated with an individual Cochrane Review so the usage data included in this report is an underestimate of overall usage activity.
- Only usage activity related to Cochrane Systematic Reviews hosted on the Cochrane Library platform is included in this report. The report does not include usage activity related to Cochrane Systematic Reviews hosted on third-party platforms.

The ten most accessed Cochrane Systematic Reviews in 2018 were:

| Review Title	Full text accesses	CD Number	Publication date	CRG
Omega-3 fatty acids for the primary and secondary prevention of cardiovascular disease	21,978	CD003177.pub3	Jul-2018	Heart Group
Prophylactic vaccination against human papillomaviruses to prevent cervical cancer and its precursors	19,480	CD009069.pub3	May-2018	Gynaecological, Neuro-oncology and Orphan Cancer Group
Early skin-to-skin contact for mothers and their healthy newborn infants	19,358	CD003519.pub4	Nov-2016	Pregnancy and Childbirth Group
Exercise for depression	19,005	CD004366.pub6	Sept-2013	Common Mental Disorders Group
Midwife-led continuity models versus other models of care for childbearing women	18,026	CD004667.pub5	Apr-2016	Pregnancy and Childbirth Group
Repositioning for pressure injury prevention in adults	17,901	CD009958.pub2	Apr-2014	Wounds Group
Interventions for preventing falls in older people living in the community	16,747	CD007146.pub3	Sept-2012	Bone, Joint and Muscle Trauma Group
Effectiveness of different nursing handover styles for ensuring continuity of information in hospitalised patients	15,643	CD009979.pub2	Jun-2014	Effective Practice and Organisation of Care Group
Interventions for preventing obesity in children	14,957	CD001871.pub3	Dec-2011	Public Health Group
Support surfaces for pressure ulcer prevention	13,925	CD001735.pub5	Sept-2015	Wounds Group

5. Usage of individual Networks

The table below shows the sum of the number of reviews published by each Network that were accessed in 2018 alongside the total number of full text accesses that these have received. This is the first time we have been able to report usage data for Networks and this may develop in future reports.

Network	Number of articles accessed	Total number of full text accesses	Average number of full text accesses per article
Cochrane Abdomen and Endocrine	2,179	856,031	393
Cochrane Acute and Emergency Care	2,338	1,359,707	582
Cochrane Cancer	1,235	475,409	385
Cochrane Children and Families	4,019	1,875,033	467
Cochrane Circulation and Breathing	2,337	1,195,118	511
Cochrane Mental Health and Neuroscience	2,893	1,569,833	543
Cochrane Musculoskeletal, Oral, Skin and Sensory	3,404	2,024,724	595
Cochrane Public Health and Health Systems	1,374	1,027,330	748

## 6. Usage of individual Cochrane Review Groups (CRGs):

Figure 3 shows the average number of full text accesses per review as accessed via Cochrane Library during 2018 (regardless of publication date). Figure 4 shows the number of publications and full text accesses for each CRG as a percentage of the *CDSR*.

Figure 3: Average number of Full Text Accesses received by Cochrane Review Groups in 2018*
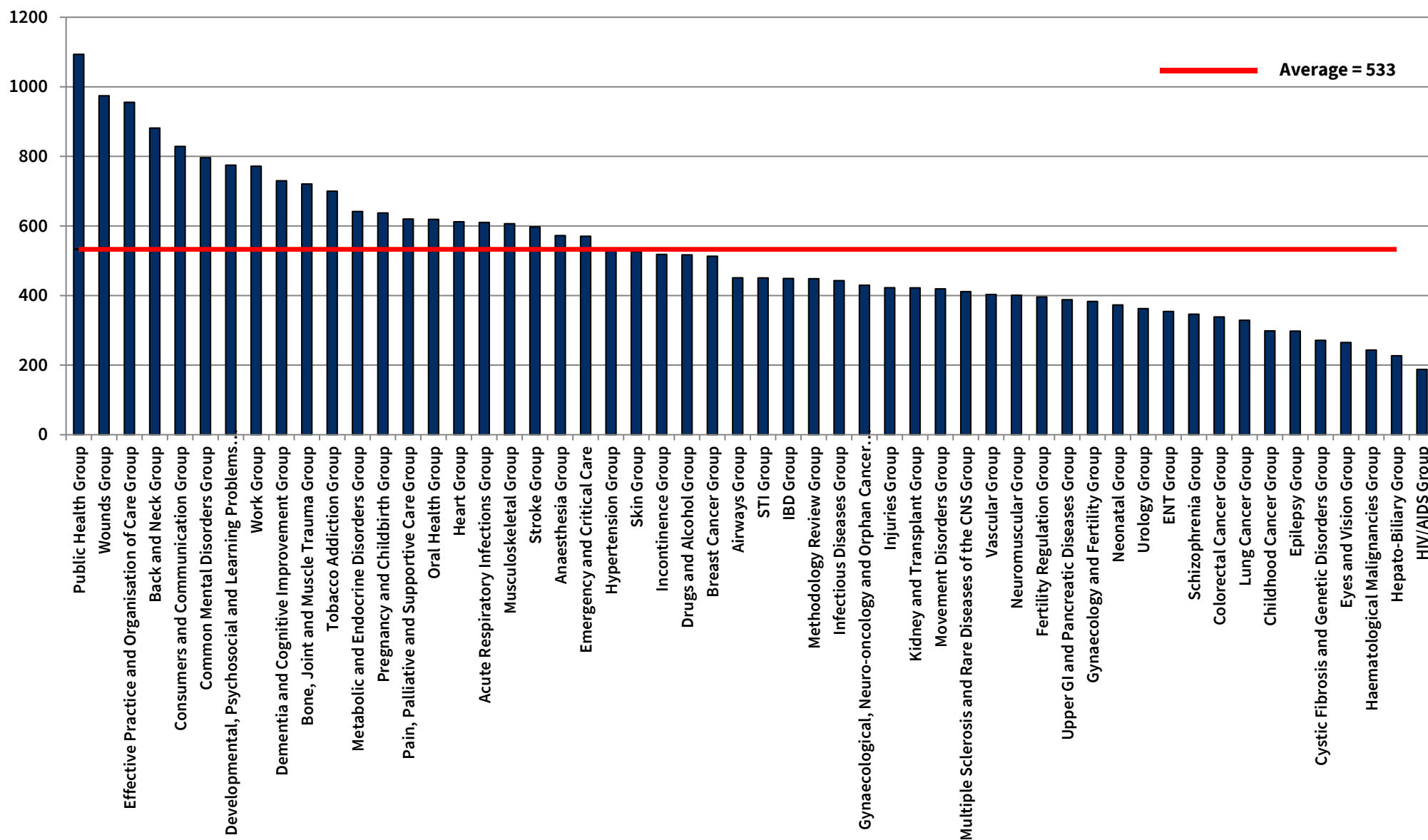
*The Anaesthesia, Critical and Emergency Care Group has now been split into Anaesthesia Group and Emergency and Critical Care Group, therefore both currently include 544 articles (301,158 full text accesses) that were published under the previous combined group name

Figure 4: % Publications (blue) and % Full Text Accesses (purple) of *CDSR* for each CRG (in order of percentage of publications)
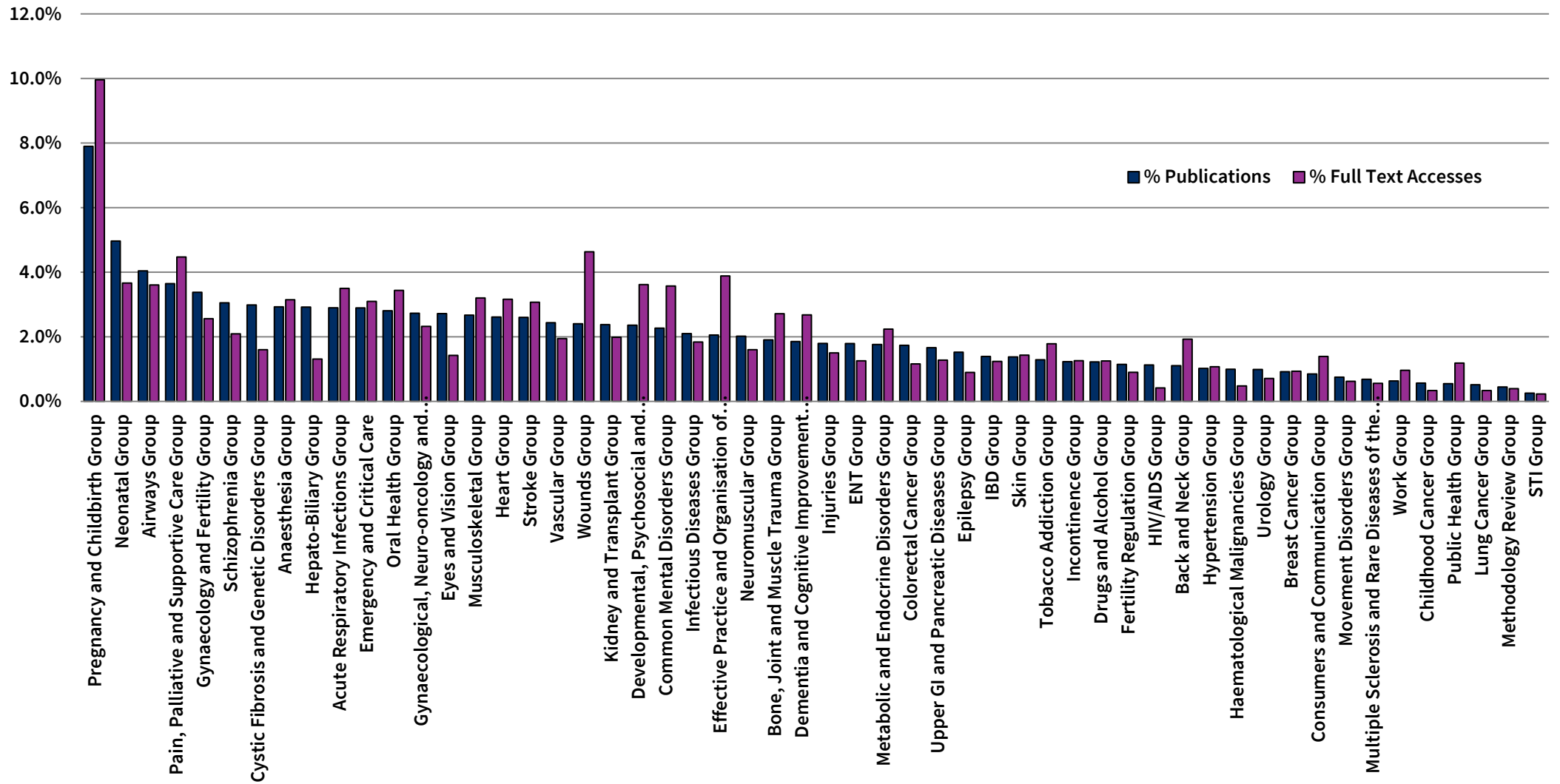
7. Alternative metrics

Altmetric

Using the Altmetric Explorer for Publishers (http://www.altmetric.com/), we are able to report on further measures of the impact of Cochrane Reviews beyond cites and usage. Altmetric have created a cluster of servers that watch social media sites, newspapers, government policy documents and other sources for mentions of scholarly articles.

The Altmetric Attention Score is a quantitative measure of the attention that a scholarly article has received. It is derived from three main Factors:

Volume - The score for an article rises as more people mention it.
Sources - Each category of mention contributes a different base amount to the final score. Further information including a breakdown of sources can be found at www.altmetric.com/about-our-data/the-donut-and-score/.
Authors - How often the author of each mention talks about scholarly articles influences the contribution of the mention.

The unique Altmetric Attention Score is available on the abstract page of every Cochrane Review that has achieved a score of one or above.

Altmetric has tracked mentions of 12,150 articles from the *CDSR* up to July 2019. The highest Altmetric Attention Scores from Cochrane Reviews published in 2018 (scores retrieved April 2019) were:

Altmetric Score	Review Title	B	T	N	F	W	M
1527	Omega-3 fatty acids for the primary and secondary prevention of cardiovascular disease	11	1,503	74	29	3	221
1179	Prophylactic vaccination against human papillomaviruses to prevent cervical cancer and its precursors	11	1,117	80	28	1	243
1098	Nurses as substitutes for doctors in primary care	0	1,629	9	17	0	14
486	Patient reminder and recall interventions to improve immunization rates	4	45	56	3	0	1
460	Homeopathic medicinal products for preventing and treating acute respiratory tract infections in children	3	635	2	3	1	70
379	Nutritional labelling for healthier food or non-alcoholic drink purchasing and consumption	5	386	22	9	0	112
372	Vaccines for preventing influenza in healthy adults	4	467	12	20	1	357
292	Honey for acute cough in children	3	319	13	6	4	193
225	Music-based therapeutic interventions for people with dementia	3	259	7	12	1	274
219	Cannabis-based medicines for chronic neuropathic pain in adults	3	278	5	11	0	157

B=Bloggers T=Tweeters N=News outlets F=Facebook mentions W=Wikipedia pages M=Mendeley readers

Altmetric track 'mentions' from 17 different sources including references in policy documents, citations in Wikipedia pages and discussions on Peer Review sites. Only sources that contributed substantially to the scores of the Cochrane Reviews in the table above have been included.

The Cochrane Review ranked first in the table above; 'Omega-3 fatty acids for the primary and secondary prevention of cardiovascular disease' has the second-highest Altmetric Attention Score of all Cochrane Reviews.

How different sources contribute to the Altmetric Attention Score can be observed in the table above. The Cochrane Review ranked fourth, 'Patient reminder and recall interventions to improve immunization rates' received the fewest Twitter mentions (45 vs average for the top 10 of 664), but was mentioned 56 times in the news (average for the top 10 was 28) which boosted its overall Altmetric score to 486.

Guidelines

Another important indicator of the impact of Cochrane Reviews in healthcare decision-making is to identify whether they have been used to inform evidence-based clinical guidelines. Cochrane UK continually search a wide range of accredited, validated guidelines across the world, in multiple languages, that are open access, check guideline portals (including the Guidelines International Network database (GIN), for example) and regularly run tailored searches in PubMed to help populate a dataset of guidelines that have been informed by Cochrane evidence. The full text of each guideline identified by the searches is checked to see whether Cochrane evidence has been used.

Cochrane UK send the guideline data to Wiley on a monthly basis, and the information is presented on the Cochrane Review on the Cochrane Library; see example below:

Cochrane Database of Systematic Reviews

Electronic cigarettes for smoking cessation

Cochrane Systematic Review - Intervention | Version published: 13 September 2016   see what's new

https://doi.org/10.1002/14651858.CD010216.pub3

Am score 1,244   **Used in 4 guidelines**   View article information

Jamie Hartmann-Boyce | Hayden McRobbie | Chris Bullen | Rachna Begh | Lindsay F Stead | Peter Hajek
View authors' declarations of interest

This new feature of the article view provides an opportunity for Cochrane Review Groups and Cochrane Library users to see up-to-date details of the impact of Cochrane evidence in healthcare decision-making. Detailed data for Cochrane Review Groups is not currently available for further analysis however we hope to be able to report greater detail in the future.

Additional information

If you have any further queries regarding these data, please contact Cathryn Jordan, Associate Editor at Wiley.