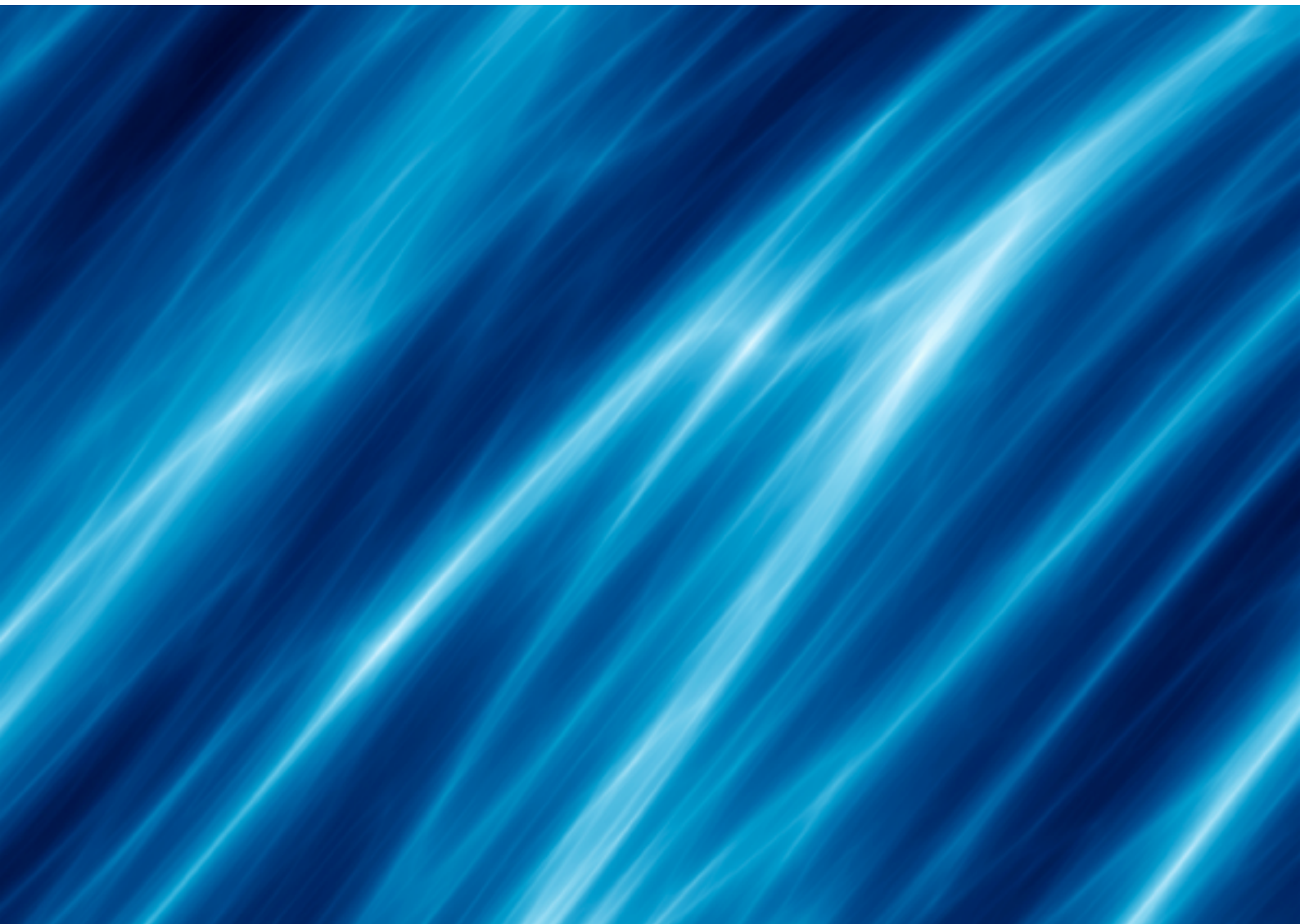


# Annual Report

2015/16



Trusted evidence.  
Informed decisions.  
Better health.

Cochrane exists so healthcare decisions get better.

We're a global, independent network of researchers, professionals, patients, carers, and people interested in health. We have more than 36,000 contributors working in 136 countries, all producing credible, accessible health information that's free from commercial sponsorship and other conflicts of interest.

Many of our contributors are world leaders in their fields – medicine, health policy, research methodology, or consumer advocacy – and our groups are situated in some of the world's most respected academic and medical institutions.

We summarize the best evidence to help people make informed choices about treatment. Over the past 20 years, Cochrane has helped transform the way health decisions are made. And our work is now an international gold standard for high quality, trusted information.

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## Message from the Director

I am delighted to introduce this Annual Report describing the first year of our current five year programme. This has been another year of growth and development at Cochrane UK as we have continued to innovate and to learn new ways of communicating and engaging with the communities we serve.

Cochrane UK has seen significant change this year, both in our office environment - thanks to a project to refurbish our accommodation for the first time in over 20 years - and in our staff team. The number of people working with us has increased and we have welcomed new colleagues to our core team. We have broadened the focus of our communications and dissemination products and services, to meet the needs of target audiences, and we have learned from and adapted our offerings as we have assessed the success of each of our campaigns. We have carefully considered the impact of Cochrane outputs this year and include in this report some impact stories that demonstrate the importance and use of Cochrane evidence and that showcase the work of the NIHR-funded and other UK Groups.

Martin J Burton

Director, Cochrane UK.

# Cochrane: Delivering *Strategy 2020*

In 2014 Cochrane published its *Strategy 2020* as a plan for change and transformation over five years and much progress has been made towards delivering the identified goals and targets.

## Goal one: producing quality evidence

### Focus on high quality relevant reviews and updates

Core to Cochrane's mission is the production of high quality, relevant systematic reviews. Cochrane launched an Integrated Quality Strategy to ensure Cochrane Review Groups and Review Authors have the materials, support and environment to produce reviews of consistently high quality. The strategy addresses all the elements affecting the quality of Cochrane output including prioritization, quality management and assurance, quality improvement, editorial and methods policy development and maintenance.

In 2015 the Cochrane Review Groups worked in collaboration with the Cochrane Editorial Unit to produce a list of 200 priority reviews, both new reviews and priority updates. In the period from 1st April 2015 to 31st March 2016, 87 of these reviews were published, 60 of which were from UK-based Cochrane Review Groups (CRGs). The list is maintained as a 'living list' of priorities providing a clear demonstration of the priority topics being addressed through review publication.

As part of the quality assurance process, the Cochrane Editorial Unit introduced a Screening Programme for new reviews. This has seen a year-on-year improvement in the quality of Cochrane Reviews. The GRADE and Summary of Findings audit showed the number of protocols describing the intention to use GRADE increased from 35% to 91% from 2013 to 2015. In addition, 70% of new Cochrane Reviews, published in 2015, had a Summary of findings table and this will continue to be part of the regular audit processes.

### Focus on transformation of production

'Project Transform' is a project centrally funded for three years and aims to improve the way people, processes and technologies come together to produce Cochrane content. This year has seen the launch of the Cochrane Task Exchange, a platform that connects people who need help with their reviews to people with the skills, time and expertise to help them. This is the first of a number of project components that will help attract those who wish to contribute to Cochrane and will make better use of skills and experience to improve and streamline review production.

An online Review Manager (RevMan) beta version was launched in 2015 as planned at the Annual Colloquium in Vienna. The new browser version has many advantages, enabling the adoption of new methods more quickly and it eliminates the need for local installation by users. This will also support integration with the new production methods and tools associated with Project Transform, as part of a whole systems approach.

# Goal two: Making our evidence accessible

## Focus on open access

As part of Cochrane's commitment to deliver universal open access to new and updated Cochrane Reviews by the end of the current strategic plan, Cochrane's open access policy was completed and formally adopted in 2015. This brings together three major advances that will be implemented in 2016:

1. Cochrane Reviews will be automatically deposited in PubMed Central after a 12 month embargo.
2. Protocols of Cochrane Reviews will be made available through Open Access immediately upon publication in the Cochrane Library.
3. Discounted 'Gold Open Access' vouchers will be made available to major funders of Cochrane Groups.

## Focus on communication

Cochrane continues to work with the media to publicize the findings of Cochrane Reviews through press conferences at the Science Media Centre, press releases and targeted dissemination strategies. There was an increase in the mention of Cochrane in consumer and lifestyle magazines and online coverage, resulting in an overall increase in media coverage of 22% compared to the previous year.

## Focus on accessibility

Following the successful launch of the newly branded library and websites, Cochrane.org now features translations in 12 languages with the entire website available in five languages. Translation will be an important focus over the next year with progress planned for the library content in 2016 and beyond.

## Goal three: Advocating for evidence

### Focus on partnership

This year Cochrane focussed on strengthening existing relationships with key partners such as Wikipedia, the Guidelines International Network (G-I-N) and the Campbell Collaboration. The partnership with the World Health Organization (WHO) was reinvigorated with a three-year support plan and Cochrane's status as an 'NGO in official relations' renewed. In 2015, a record 87 Cochrane reviews were cited in WHO Guidelines, with 75% of WHO Guidelines now using Cochrane Reviews.

New partnerships were formed with the Pan-American Health Organization (PAHO), the GRADE Working Group, the Joanna Briggs Institute and the Union for International Cancer Control. A new Partnership Strategy was developed to provide a framework and guidance on the choices of strategic partnerships to support groups working in partnership.

### Focus on the Cochrane brand

The launch of the rebrand of websites in early 2015 provided a unified look and feel across the whole Cochrane website family and resulted in a 30% increase in traffic to the Cochrane.org website by the end of 2015. The rebrand project was completed in February 2016 with the launch of the Cochrane Community website.

# Goal four: Building an effective and sustainable organization

## Focus on transformation

Cochrane requires significant organizational change to deliver all the elements of Strategy 2020. This year saw considerable progress in the design of these changes and consultation about them, with the finalization of plans for a new governance structure with increased external expertise and a reduction in the membership representation at board level.

Structure and function reviews were undertaken to consider the function and roles of Centres and Branches and this was adopted in early 2016. Consultation is underway to consider options surrounding the structure and function of the Review Groups and work will continue on this project in 2016/17.

## Focus on business development

Cochrane Innovations – the wholly owned, commercial arm of Cochrane - develop business opportunities on behalf of Cochrane in support of the goal of generating income for the organization to replace publishing royalties. They have established a new evidence consultancy unit: Cochrane Response. This unit works closely with Cochrane networks to increase capacity to respond to commissioned review requests and tailored evidence services. In addition, Cochrane has invested in new Fundraising Co-ordinators to support grant applications to the European Union and to work with Trusts and Foundations seeking alternative funding streams.



# Cochrane UK

## Goal One: producing evidence

### Author training

Cochrane UK has supported *Strategy 2020* by continuing to provide training courses for Cochrane systematic reviewers – the ‘Review Author’ courses. Cochrane Authors undertake Review Author modules one (RA1) and two (RA2) at the beginning of the review journey, aimed at defining the right question and to develop the review protocol. They return later in the process for modules three (RA3) and four (RA4), which focus on the collection of data and use of new and more complex methods of analysis, such as the generic inverse variance approach, when summary data are not available for each intervention group.

The Review Author training programme is overseen by our Senior Fellow in Cochrane Methods Training, Chris Cates, and is delivered by experienced faculty trainers. This year we delivered 12 individual courses to 98 participants across the four training modules, delivered in Oxford and London, with help from Cochrane Airways.

The outline materials for these courses are collated by the Cochrane Learning and Support Department and are continuously updated by Chris and the training team at Cochrane UK to ensure they are current. This year we prepared and have piloted a new exercise on selection of studies in module RA2 and have accommodated the changes to the online GRADE tool for preparing Summary of findings tables in module RA4.

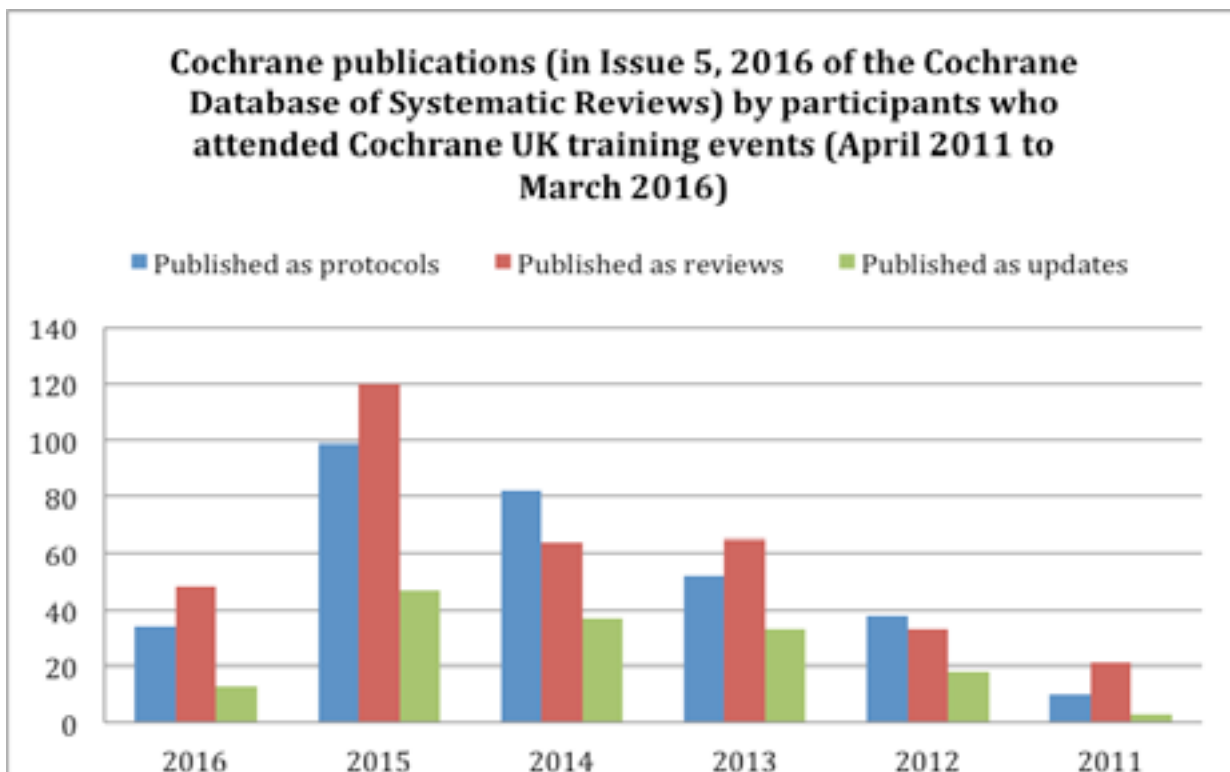
The contract with the Biostatistics, Evidence Synthesis and Test Evaluation Research Group at the University of Birmingham, to deliver Diagnostic Test Accuracy (DTA) Review training ended in March 2015. Support for authors and groups conducting DTA and other types of complex reviews, is now provided by the NIHR Complex Reviews Support Unit (NIHR CRSU). The team from the NIHR CRSU delivered a workshop at the Cochrane UK and Ireland Annual Symposium, ‘Methodological challenges in complex reviews’ exploring the challenges groups and authors face and the role of the CRSU in supporting this type of review. The workshop was well attended and equally well received by delegates. We continue to work in collaboration with the NIHR CRSU to explore the optimal approach to training and support for Cochrane Authors.

Cochrane is in the process of reviewing the content and infrastructure for delivery of Cochrane training in the future and this may affect training priorities over the coming years. At present, the demand for Review Author workshops remains high and the courses are popular both with new reviewers and with those who have previous experience of writing reviews, who need an update on the newer methods available, which allow data from trials to be incorporated into the reviews in the most appropriate and efficient way. We continue to seek new trainers to join our faculty and to increase the spread of workshops across the UK (London and Oxford this year and plans for Manchester and Oxford next year).

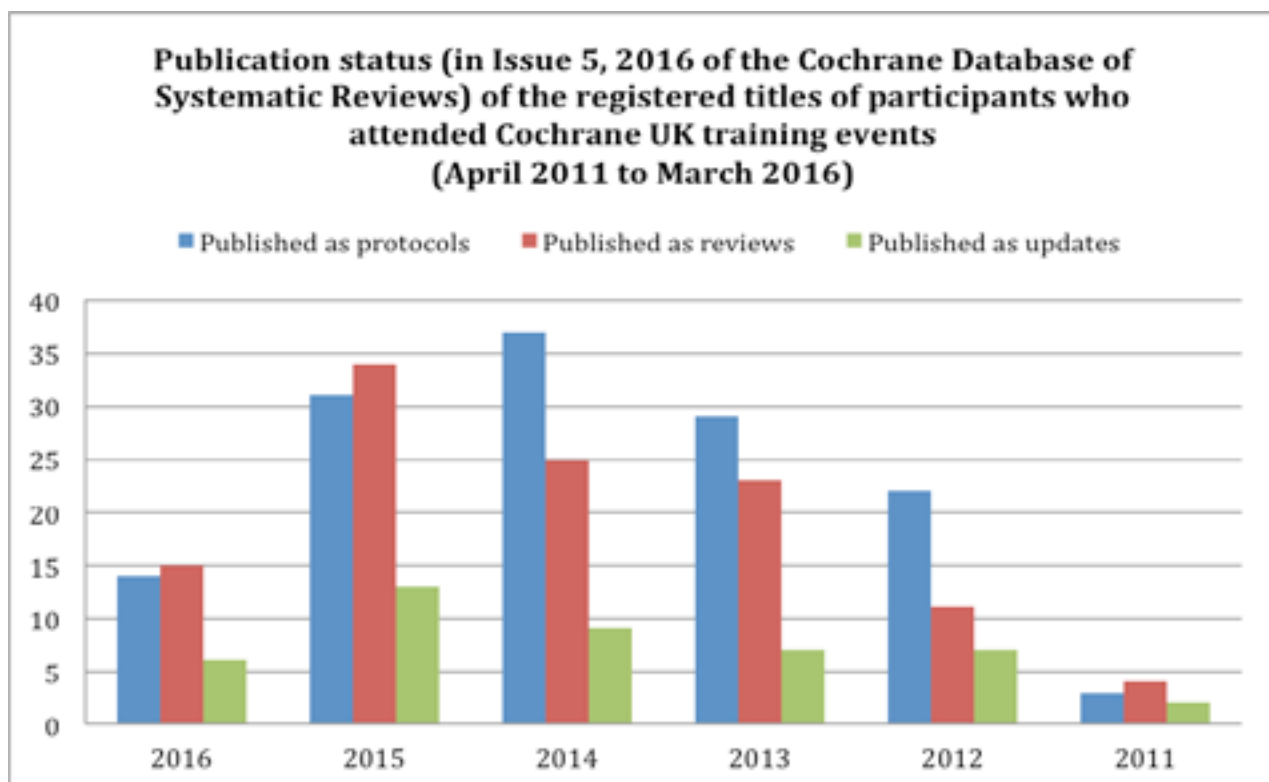
To keep abreast of new methods and developments, Chris Cates is a member of the group working on the new Cochrane Risk of Bias tool (RoB 2.0) and will incorporate the new tool into the training programme when it goes live (expected 2017). Cochrane UK is part of the new UK GRADE network with Chris Cates representing the Centre at the GRADE Network Steering Group. We look forward to working jointly with NICE, SIGN and the BMJ to provide training in how to improve the use of GRADE in systematic reviews, which has been identified as a current problem by the screening initiative at the Cochrane Editorial Unit.

One measure we use to monitor the output of the Cochrane UK Review Author training events is to track the review titles registered at the time of attending the training to establish how many achieve publication as a protocol, review or update of a review, using a five-year period as a data set.

We searched Issue 5, 2016 of the Cochrane Database of Systematic Reviews. During the five-year period from April 2011 to March 2016, 503 Cochrane UK training event participants worked on 417 review titles and approximately a third are as yet unpublished (n=125). Of the 292 that have been published, 136 are protocols (33%), and 156 are reviews (37%) of which 44 are updates. The majority have publication dates in the last three years.



We also tracked the participants by searching for their names as authors to determine how many Cochrane publications they have achieved during the five-year period of the data set (2011 to 2016). Of the 503 participants who attended Cochrane UK training events between April 2011 and March 2016, just over a quarter have not yet published (n=137) and 366 have published a total of 315 protocols, 351 reviews and 151 review updates, an average of just over two per person



(range: 1 to 35).

## **Cochrane Ireland**

This year Cochrane Ireland received 207 applications for its two-day Cochrane Systematic Reviewing course. This includes introductory material and about half of the RA1 and RA2 material. Throughout 2015, all but 35 applicants were offered places on at least one of these courses. Some declined a place due to a lack of available time. A total of 130 people completed this training course in 2015, an increase from 52 in 2014 and 55 in 2013. The increase was made possible by approval from the funders to offer the course seven times, an increase from four in previous years.

### **Irish Fellowships**

Our colleagues at Cochrane Ireland – based in Dublin – continue to engage with communities in both parts of the island of Ireland. Of particular relevance to SRPAG, they support Cochrane Authors in Northern Ireland. The Health Research Board (HRB) in the south and Public Health Agency in the north again offered the Irish Fellowship Programme. This competitive programme provides funding to undertake and publish a Cochrane Review of importance to the health services on the island of Ireland. This year we had 17 applications in total with seven awards being made, covering topics across a spectrum of health needs relevant to the island.

## **Cochrane UK and Ireland Annual Symposium**

The Cochrane UK and Ireland Annual Symposium was held in Birmingham this year and was attended by a record number of 223 delegates. The theme was Impact, Invention & Ingenuity, which provided scope for plenary talks on public health, the use of comedy for communicating evidence, impact factors and innovative work from the Cochrane Oral Health Group.

The event provided an opportunity for Chris Cates and Dr Nichole Taske, Associate Director (Methodology), at the National Institute for Health and Care Excellence (NICE), to give a joint presentation to the Managing Editors of the UK-based Cochrane Review Groups, on how Cochrane and NICE can understand each other's culture and work together more effectively. The feedback from this session was very positive and the slides and resources from the presentation are available to view on the Cochrane UK website [here](#).

# Goal Two: making our evidence accessible

## Cochrane Colloquium

A highlight of the year was attendance at the Cochrane Colloquium in Vienna. This was the 23rd Cochrane Colloquium, bringing together 1356 delegates from across the globe and centred on the theme, 'Filtering the information overload for better decisions'. This was a great opportunity to hear about innovation and challenges in research and practice and to learn from the work of other groups seeking to share and implement Cochrane evidence. Our Knowledge Broker, Sarah Chapman, presented two oral sessions at the event:

The first, 'New Evidence, new ways to share it, new audiences: Pushing the boundaries with social media', presented Cochrane UK work on sharing evidence using blogs, social media and video formats through targeted campaigns.

The second, 'Best evidence for better practice: using social media to help nurses engage with evidence', presented the integrated communications approach to engaging the nursing community in discussing evidence for using pressure ulcer risk tools through partnership, new media and targeted dissemination.

The meeting provided the opportunity for the team to discuss the work of Cochrane Norway on Plain Language Summaries and incorporate elements of this work into our infographics to increase accessibility and understanding of Cochrane evidence to a wide audience.

## Media Engagement

In this period, we further streamlined the effectiveness of our engagement with the media. Cochrane UK maintains an up-to-date media contacts list of active broadcasters, writers and bloggers who produce pieces on health and science across the UK.

We work closely with Cochrane's global communications team to agree which reviews will be shared via press briefings with the Science Media Centre, by press release or through sharing the review's Plain Language Summary. Typically one to three reviews a week are shared with this media list. In addition, reviews selected for wide dissemination are also shared with key charity, patient and other interest groups. Reviews are assessed for the quality of evidence, popular interest in the subject matter, size of the review and whether it is new or an update before a decision is reached about wider dissemination.

In March 2016, examples of media success and the process of gaining media coverage was shared and presented to Cochrane Managing Editors at the Cochrane UK and Ireland Annual Symposium in Birmingham. We provide ongoing support to the Managing Editors and their author teams to help us both achieve mutually beneficial dissemination goals.

Media engagement in numbers in this period:

- Over 80 Cochrane Reviews shared with journalists
- Over 3,000 pieces of coverage achieved globally
- Over 20 national journalists met face to face or were briefed on Cochrane's work on the 'phone or by e-mail

## Highlights

In July 2015, there were 52 media hits for the review, 'Mid-urethral sling operations for stress urinary incontinence in women'. This topic was identified as of high interest and so a press conference was held with the Science Media Centre to gain maximum impact and facilitate accurate and consistent reporting of the review findings. As a result, there was coverage of the review by the BBC and the *BMJ*. Working closely with colleagues from the Cochrane Central Executive Team and Editorial Unit ensured that utmost care was taken to manage risk around the 'anti-mesh' lobby groups.

In September 2015, a review, 'Portion, package or tableware size for changing selection and consumption of food, alcohol and tobacco' was published and secured over 200 media hits. The review was widely covered in the media by journalists from *The Guardian*, *Mail Online*, *The Telegraph* and *The Times*. The Review Group worked closely with the Cochrane Central Executive Team and Cochrane UK to produce a range of content sharing the results of this review. This

review is among the most highly accessed in the library in this period.

In November 2015, a review, ‘Methylphenidate for children and adolescents with attention deficit hyperactivity disorder (ADHD)’, secured a high level of media interest. Journalists from *The Times*, *The Telegraph*, *The Herald*, *The Lancet*, *Mail Online*, *BBC Online*, *BBC Radio 5 Live*, *Reuters* and *The Mirror* covered publication.

In February 2016, a review, ‘Legislative smoking bans for reducing harms from second hand smoke exposure, smoking prevalence and tobacco consumption’, received good coverage and media interest in the UK including *The Guardian*, over fifty local and regional papers, *Reuters*, *BMJ*, *Buzzfeed*, *The Daily Mail* and *The Times*.

In March 2016, a review, ‘Workplace Interventions for reducing sitting at work’, was covered by *The Guardian*, *The Times*, *The Evening Standard*, *The Daily Mail* and others.

We are also now working closely with the NIHR communications team to join up our efforts to increase reach. Whilst we have succeeded in securing an increase in media coverage, we will be working to improve our presence on third party blogging ‘spots’ on *The Conversation*, *Huffington Post* and others. We have now established processes for coverage of Evidently Cochrane blogs on *BMJ blogs* and *Buzzfeed* is now making regular reference to Cochrane Reviews.

## Evidently Cochrane

Between 1 April 2015 and 31 March 2016 we published 69 blogs on Evidently Cochrane, featuring 99 Cochrane reviews.

### Bringing patient and professional experience to the blogs

The combination of clear and accessible evidence summaries with perspectives from patients or clinicians in many of our blogs is highly valued by our readers. Over the past year we have had 16 guest blogs, including one by a 15 year old, and in others have included a commentary on our evidence summary by someone for whom it is relevant.

### Awareness events and campaigns

Some of our weekly blogs link to awareness events or campaigns and in the past year these have included Sport England’s ‘This Girl Can’ campaign, Choosing Wisely, and World Antibiotics Awareness Week, for which we created a special collection on our website of blogshots on relevant reviews and a blog by Cochrane UK Senior Fellow Richard Lehman, on an important new Cochrane review on shared decision-making and antibiotic prescribing in general practice. These were shared by many doctors on Twitter, often with their own comments; for example

*“Lots of antibiotic discussions with patients in surgery this am, then a few mins reading why it matters so much”*

@DR\_A\_RASHID (NHS doctor, Cambridgeshire)

*“Providing useless treatment is worse than doing nothing. It can harm your patient & others.”*

@ArtKellermannMD (Dean of Hebert School of Medicine, USU)

We also ran our own campaign weeks, with multiple blogs or other social media outputs on a single theme. This year’s Evidently Advent campaign - a good way for us to reach a new audience - featured six Lego animations about Cochrane Reviews.

*“Fabulous, really inventive way of getting evidence across, so impressed!”*

@GabrielleLevy Editor RIB (Royal College of Nursing Research Innovation Bulletin)

## *“Thanks to @ukcochraneentr for another creative presentation of research evidence”*

*@HBmedlib Helen Baxter, Clinical Librarian, Melbourne, Australia*

We had a ‘healthy weight’ week to coincide with the publication of the new Cochrane Review on portion size, for which we produced a blog, an infographic and several blogshots, as well as blogs on other reviews relevant to healthy weight. Our other campaigns during this reporting period launched our new ‘Evidence for Everyday’ series.

### **‘Evidence for Everyday’ series**

In November, we launched Evidence for Everyday Nursing (#EENursing) and Evidence for Everyday Midwifery (#EEMidwifery), followed in February by Evidence for Everyday Health Choices (#EEHealthChoices) for patients and others making choices about their health. These are ongoing series, with dedicated blogs and blogshots for these audiences and occasional tweetchats. The objective is to increase engagement with these groups and to make it easier for them to access relevant evidence.

The response has been very positive, with many comments like these:

## *“This hashtag [#EEMidwifery] is revolutionizing how students and midwives alike can stay up to date with the latest evidence”*

*@Nicolacbrown12 (3rd year student midwife, Queen’s University Belfast)*

## *“A great initiative in order to improve our practice. Thanks a lot.” [#EENursing]*

*@EdurneZabaleta (Nurse researcher, Barcelona)*

These series have enabled us to make new connections, invite new partnerships and strengthen existing relationships with stakeholder groups. For #EEMidwifery we have partnered with The Practising Midwife, an evidence-based journal. We will be co-writing four Cochrane Corners with them in 2016, for co-publication in the journal and on Evidently Cochrane; the December issue of the journal featured a ‘Viewpoint’ article written by Sarah Chapman, introducing Evidence for Everyday Midwifery.

Good relationships with the #WeCommunities, including @WeMidwives and @WeNurses, increase our reach on social media and facilitate our engagement with a range of health professionals. This is really important for getting evidence into practice.

### **Evidence for Everyday - impacting clinical practice**

A Cochrane Review on the management of peripheral vascular catheters was the focus for the #WeNurses tweetchat which we guest hosted, supported by two of the review authors, Claire Rickard and Joan Webster. This was a really successful session, with 63 contributors sharing over 400 tweets, and revealed a wide variation in practice despite current guidelines that are in line with the evidence. Details of the chat can be found in full here <http://wecommunities.org/tweet-chats/chat-details/2581> and in this reflection on the tweetchat in an Evidently Cochrane blog <http://www.evidentlycochrane.net/getting-evidence-into-nursing-practice-replacing-the-routine/>. Two nurses followed their participation with action in their clinical areas:

@CraigBradleyF1, an Infection Prevention Nurse, tweeted during the tweetchat: “leaves little room for argument, let’s get on it!” The next day:



*“To update: we are on it and will be making change soon based on the latest evidence #tweetchat to #action”*

Later, January 12 2016, Craig updated us again:

*“I added changes to the new policy document and now just waiting for it to be approved”*

Nursing Student Darren followed up the tweetchat by questioning their practice of routine replacement with the ward sister and was told it was Trust policy. He said he would be taking it up with the infection control team.

#### **Evidence for Everyday - impacting health choices**

The launch week for Evidence for Everyday Health Choices (#EEHealthChoices) included a slidecast made by Cochrane Senior Fellow, Lynda Ware, introducing evidence-based medicine (EBM) and Cochrane, together with blogs on orthodontic retainers, written by a teenage retainer-wearer, as well as blogs on grommets, constipation and running. The blog on Cochrane evidence relevant to runners, incorporating the story of Eddie Izzard’s 27 marathons challenge for Sport Relief, which he had started that week, was a highly topical blog with a wide potential audience. We were delighted that it was picked up by the Mail Online and subsequently by other global press outlets.

Comments on Twitter showed an appetite for reliable information relevant to everyday choices; for example:

*“This piece about #Marathons is brilliant, could you do one on Compression/Gels and a few others?”*

@ukmarathonchat

*“Great article putting the evidence review in the context of real life”*

@VPrescriber

*“I love @UKCochraneCentr. In the midst of much misleading online wibble, this is the place for evidence-based info.”*

@ke2mey (Developmental Psychologist)

*“Thank you Liv. My son (and half his class) is going through this at the moment and it's really helpful to read the blog.”*

@RMEngagement

#### **#WeCATS Critical Appraisal Twitter Sessions**

This year we launched #WeCATS, a joint initiative with @WeNurses, @CASPUK and @Mental\_Elf, to bring critical appraisal sessions to Twitter. The emphasis of these sessions is on people who have few critical appraisal skills but the chats have been joined also by those with greater experience, making for a useful and interesting mix.

The third #WeCATS tweetchat looked at systematic reviews, using the recent Cochrane Review on portion size as an example. Ninety-eight contributors to the chat shared 657 tweets. CASP (Critical Appraisal Skills Programme) led the first half of the chat introducing some basics about systematic reviews and Cochrane UK (Sarah Chapman) and Ian Shemilt led the second half to look at the portion size review.

Link to chat details: <http://www.wecomunities.org/tweet-chats/chat-details/2603>

This is a fairly challenging activity but the initiative has been welcomed, particularly by nurses wishing to improve their ability to engage with research, and more tweetchats are planned.

## Keeping Well

Cochrane UK continues to write an 'Evidence Matters' article for 'Keeping Well', the quarterly newsletter of the Patient Participation Group at the Nuffield Practice, Witney. These all feature one or more Cochrane Reviews, summarizing the evidence for those attending this busy practice.

## Blogshots

In June 2015, we started experimenting with blogshots to share Cochrane evidence. These images with brief information, shared through social media, are proving to be very popular. Our most successful blogshot so far, on the new Cochrane Review on portion size, quickly generated more than 1000 clicks through to the review. Initially developed with user feedback on social media, over the year we have continued to develop and adapt the format, tailoring it for our new 'Everyday' series for specific audiences. We have drawn on work conducted by Cochrane colleagues for the development of Plain Language Summaries to ensure that these mini evidence summaries are consistent, accurate and accessible.

They are now translated into other languages, by Cochrane translators, and we are working to make our blogshots widely available throughout Cochrane and to enable others to create blogshots as part of their dissemination activity. For our external audiences, the blogshots are shared on our Cochrane UK website, Twitter, Facebook and Instagram, a new platform for Cochrane UK this year. We also started sharing them on Pinterest, but with the links not fully supported we are in the process of making the transfer to Tumblr, where we will be able to have a searchable archive of blogshots. Between June 2015 and 31 March 2016 the following were published:

### 112 Blogshots

92 reviews (41 new; 51 updates) were highlighted from 34 Cochrane Review Groups (20 UK based)

- 22 blogshots were linked to health awareness events/priorities/NICE guidance:
  - 4 to Stoptober
  - 4 to portion size and healthy eating campaign
  - 6 to World Antibiotics Awareness Week
  - 2 to Stop Pressure Ulcers Day
  - 1 to World Cancer Day
  - 2 to World Oral Health Day
  - 1 to coincide with Oxford University Hospitals NHS Foundation Trust's new discharge plan policy
  - 1 to coincide with the latest NICE guideline publication
  - 1 addressing no. 3 priority in a list of top ten priorities for research evidence for the NIHR James Lind Alliance Priority Setting Partnership for Multiple Sclerosis

43 blogshots were linked to 4 campaigns:

- 14 to Evidence for Everyday Nursing
- 13 to Evidence for Everyday Midwifery
- 7 to Evidently Advent
- 9 to Evidence for Everyday Health Choices

Topics covered included:

- helping smokers to quit
- midwifery-led care and evidence for everyday maternal and newborn care
- patient safety in when to replace peripheral venous catheters, treating and preventing pressure ulcers and other evidence for everyday nursing care
- considered use of antibiotics



- discharge planning from hospital to home
- detecting dementia (Cochrane Diagnostic Test Accuracy Review)
- drug treatments and behavioural interventions for vulnerable people (those with depression; attention deficit hyperactivity disorder, those with intellectual disabilities; substance-using adolescents)
- preventing and treating fatigue in multiple sclerosis and after stroke
- alleviating pain
- portion size, healthy eating and lifestyle interventions to maintain health and wellbeing at work and at home
- oral health

## Working with the NIHR Dissemination Centre

We have developed a good working relationship with the NIHR Dissemination Centre (NDC) over the past year and in particular have welcomed the excellent NDC SIGNALS, many of which cover Cochrane Review outputs. The inclusion of expert raters' comments on these dissemination products have provided useful insight from a range of healthcare professionals and others on how Cochrane evidence might help them to investigate promising interventions or change practice or otherwise inform their decision-making. We are monitoring the use of Cochrane reviews in the output of the NDC to help us understand better the impact of Cochrane evidence and to contribute information to our portfolio of 'impact stories' for wider dissemination. During this reporting period 18 Cochrane Reviews from 13 Cochrane Review Groups (7 UK based) have provided evidence for NDC SIGNALS.

## Digital Impact

At Cochrane UK we monitor activity on all of our websites, uk.cochrane.org, Evidently Cochrane and Students 4 Best Evidence. Across all three websites there has been an increased number of users visiting the sites year on year. There is a significant increase in the number of users accessing uk.cochrane.org (three to four fold) reflecting the attractiveness and success of the Cochrane rebranding. There is steady growth of our audience across all social media channels. More information on the analytics recorded can be found in **Appendix 1**.

## Use of Cochrane reviews to inform UK-published healthcare guidance (NICE Guidance, SIGN guidelines)

One method we use to monitor the impact of Cochrane Reviews in healthcare decision-making is to identify whether they have been used to inform evidence-based clinical guidelines. We are continuing to check guideline developers' websites to capture newly published guidelines to maintain the currency of the Cochrane UK guidelines data set of Cochrane reviews that have informed healthcare guidance worldwide; our data include a subset on UK-published guidance.

### NICE Clinical Guidelines

In the reporting period (April 2015 to March 2016), NICE has published 23 new clinical guidelines and 16 updates: **35 (90%)** of these have been informed by **223 Cochrane reviews** (125 With UK- or Ireland-based authors) from 34 Cochrane Review Groups (20 UK based).

### NICE Public Health Guidance

NICE has also published five new Public Health Guidance documents and three updates: **five (63%)** of these informed by **17 Cochrane reviews** (12 With UK- or Ireland-based authors) from six Cochrane Review Groups (five UK based).

### NICE Social Care Guidelines

NICE has also published four social care guidelines: **three (75%)** of these informed by **seven Cochrane Reviews** (all with UK- or Ireland-based authors) from three Cochrane Review Groups (all UK based).

### NICE Medicines Practice Guidelines

NICE has also published **one Medicines Practice Guideline** informed by **five Cochrane Reviews** (three with UK- or Ireland-based authors) from two Cochrane Review Groups (one UK based).

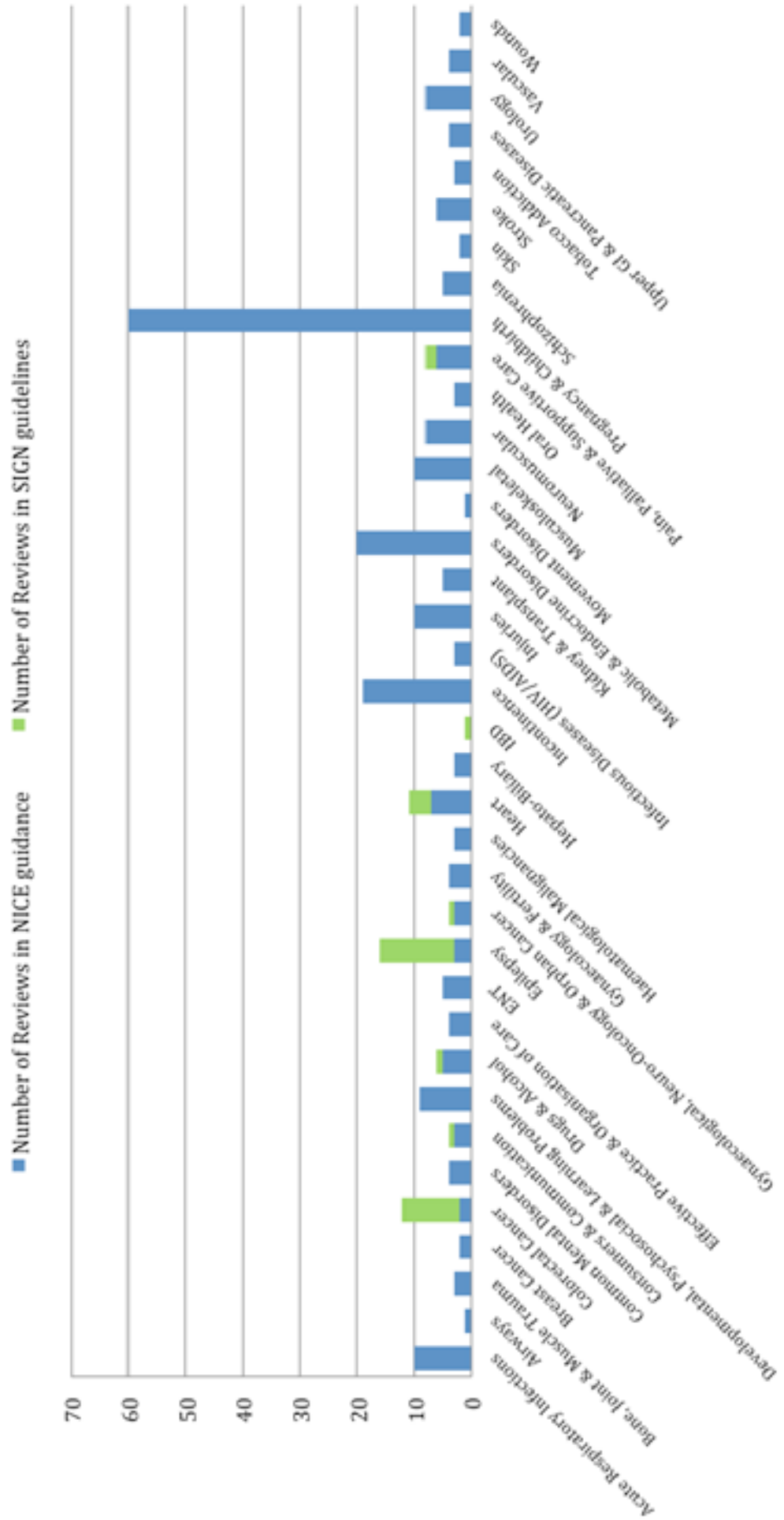
### SIGN (Scottish Intercollegiate Guidelines Network) Guidelines

SIGN has published one new guideline and two updates: all (100%) of these informed by 33 Cochrane Reviews (21 with UK- or Ireland-based authors) from eight Cochrane Review Groups (four UK based).

Overall, **282 Cochrane Reviews** (163 with UK- or Ireland-based authors) from 37 Cochrane Review Groups (22 UK based) have been used to inform **47 of 55** (85%) UK published guidelines (NICE Clinical Guidelines, NICE Public Health Guidance, NICE Social Care Guidelines, NICE Medicines Practice Guidelines and SIGN guidelines) (**see Figure 1**).

- maximum number of reviews used from any one Cochrane review group is 60 (Pregnancy & Childbirth)
- maximum number of reviews used to inform any one guideline is 44 (Antenatal care – routine care for the healthy pregnant woman – latest revision of NICE clinical guideline CG62)
- six guidelines have used over 10 Cochrane Reviews to inform their guidance
- Antenatal care – routine care for the healthy pregnant woman (NICE CG62: 41 Cochrane Pregnancy & Childbirth Reviews; 3 Cochrane Infectious Diseases (HIV/AIDS) Reviews)
- Urinary incontinence in women (NICE CG171: 18 Cochrane Incontinence Reviews)
- Diagnosis and management of epilepsy in adults (SIGN 143: 13 Cochrane Epilepsy Reviews; 1 Cochrane Drugs & Alcohol Review)
- Diagnosis and management of colorectal cancer (SIGN 126: 10 Cochrane Colorectal Cancer Reviews; 1 Cochrane IBD Review; 1 Cochrane Consumers & Communication Review; 1 Cochrane Pain, Palliative & Supportive Care Review)
- Type 2 diabetes in adults: management (NICE NG28: 11 Cochrane Metabolic & Endocrine Disorders Reviews; 2 Cochrane Kidney & Transplant Reviews)
- Preterm labour and birth (NICE NG25: 10 Cochrane Pregnancy & Childbirth Reviews; 1 Cochrane Airways Review)

**Figure 1: 282 Cochrane Reviews used to inform UK healthcare guidance (NICE Guidance & SIGN Guidelines) published between April 2015 and March 2016**



# Are Cochrane reviews also being used to inform best practice guidance in primary care? (NICE Clinical Knowledge Summaries)

In the reporting period (April 2015 to March 2016), **237 Cochrane reviews** (106 with UK- or Ireland-based authors) from 31 Cochrane Review Groups (18 UK based) have been used to inform **89 of 164 (54%)** NICE Clinical Knowledge Summaries (see **Figure 2**).

- maximum number of reviews used from any one Cochrane review group is **31** (Acute Respiratory Infections)
- maximum number of reviews used to inform any one Clinical Knowledge Summary is 16 (Back pain – low: without radiculopathy)
- 11 Cochrane Reviews have been used in more than one Clinical Knowledge Summary:
- 8 in 2
- 3 in 3

The top three Clinical Knowledge Summaries using the highest number of Cochrane reviews are:

- Clinical Knowledge Summaries - **Back pain - low (without radiculopathy)** (using **16** Cochrane reviews: 16 – Cochrane Back & Neck)
- Clinical Knowledge Summaries – **Common Cold** (using **14** Cochrane reviews: 14 – Cochrane Acute Respiratory Infections)
- Clinical Knowledge Summaries - **Urinary tract infection (lower) – women** (using **10** Cochrane reviews: 7 – Cochrane Kidney & Transplant; 3 – Cochrane Pregnancy & Childbirth)

The top **three** most frequently used Cochrane Reviews are:

- **Advising patients to increase fluid intake for treating acute respiratory infections** (Cochrane Acute Respiratory Infections – in three summaries)
- **Prevention of NSAID-induced gastroduodenal ulcers** (Cochrane Upper GI & Pancreatic Diseases – in three summaries)
- **Water for wound cleansing** (Cochrane Wounds – in three summaries)

## Impact stories

Beyond auditing the use of Cochrane Reviews in guidelines and other evidence-based guidance, we are also interested in tracking policy documents where Cochrane Reviews are contributing data for preventing harm or for promoting health and wellbeing.

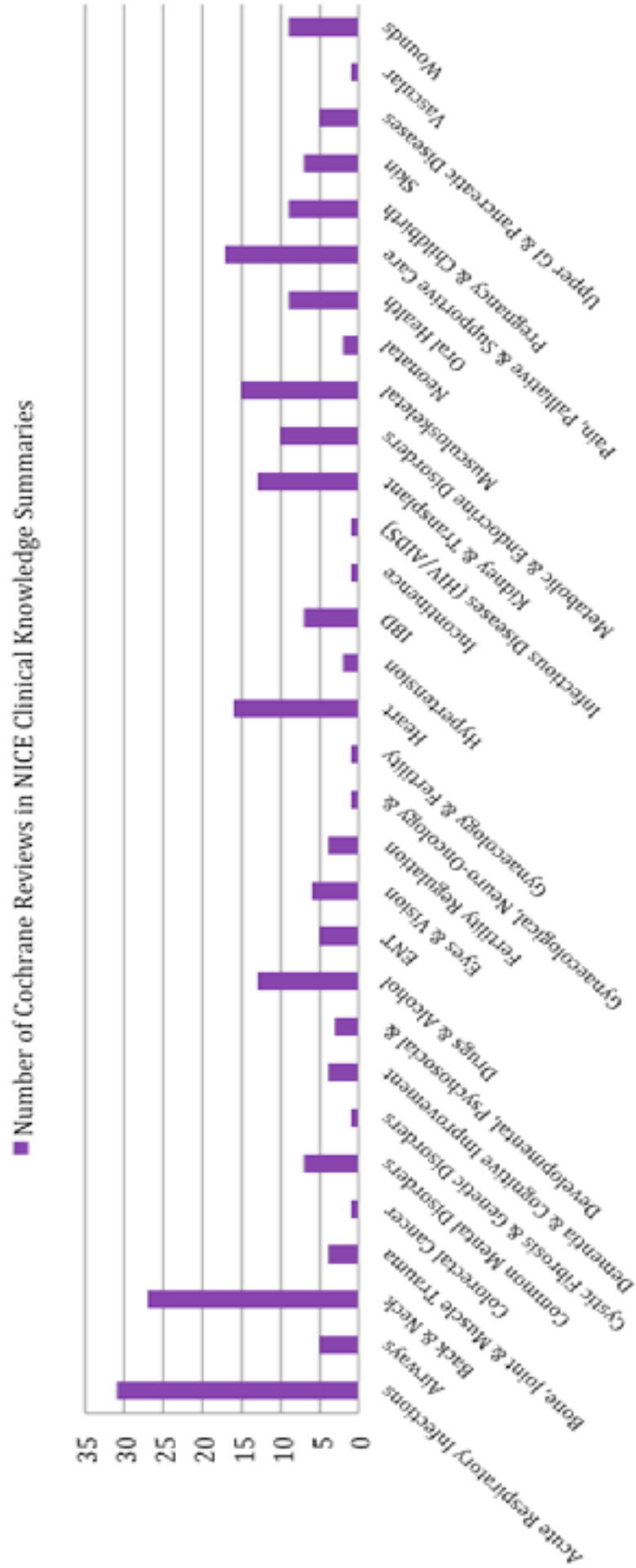
In addition, we are also now gathering a portfolio of ‘impact stories’ where Cochrane evidence is:

- helping to shape ideas and influence policy development in health care;
- helping to change clinical practice;
- leading to new research;
- identifying promising interventions that warrant further investigation in clinical practice, research or guideline development;
- indicating where further research is no longer necessary;
- or influencing the withdrawal of ineffective or unnecessary interventions.

We are seeking to follow the evidence trail from the initial use of Cochrane evidence through to any subsequent changes in policy or practice and charting any resulting effects on health status of patients, the wider population or health service delivery, to understand better the impact of such evidence on the health and wellbeing of the nation.

We have included at the end of this report a suite of Impact Case Studies to demonstrate the way in which Cochrane Reviews have been extensively used in a variety of different ways by a broad range of organizations.

**Figure 2: : 237 Cochrane Reviews used to inform primary care guidance in NICE Clinical Knowledge Summaries published between April 2015 and March 2016**



## Goal three: Advocating for evidence

### Students 4 Best Evidence

Students 4 Best Evidence (S4BE, S4BE.org), the international community for students who want to learn more about evidence-based health care, continues to be supported by Cochrane UK. S4BE also has 37 other partner organizations that help promote the work of the community.

S4BE has continued to expand internationally with the help of its partner organizations. Here are the key numbers for 2015/16:

- S4BE currently has 279 student contributors
- S4BE has been represented at the following events, during 2015/16:
- Cochrane UK & Ireland Annual Symposium 2015, held in Birmingham, UK
- Cochrane Colloquium 2015, held in Vienna, Austria

In April 2015, Students 4 Best Evidence was nominated for the UK Blog Awards and won in the category of Education.

Students 4 Best Evidence, in collaboration with Testing Treatments, are planning a new blog series, on the theme of 'understanding claims made about interventions'. The series will comprise 32 blogs, each relating to a different key concept based on a curriculum developed by The James Lind Initiative and Informed Healthcare Choices. An example of a key concept is 'absence of evidence is not evidence of absence'. S4BE will seek to formally evaluate whether the blogs in this series improve undergraduates' understanding of the key concepts.

### Engaging trainees

Engaging medical trainees in the work of Cochrane UK has remained a priority this year. Two Oxford Deanery Cochrane Fellows were appointed in 2015. The first fellow, Dr Anna Sutherland, a trainee in palliative medicine, started in early 2016. In addition to undertaking a systematic review, Anna has been instrumental in reviving the Cochrane UK and Ireland (CUKI) Trainees' Advisory Group that aims to enhance trainee engagement in evidence-based health care and systematic reviews generally, and the work of Cochrane specifically. Anna has led a very successful national recruitment campaign for committee members, with 84 very high quality applicants for the 10 committee posts. The applicants were from across the UK and Ireland and represented a broad range of specialties.

The Centre also has 'National Treasure' status as a training placement with the Faculty of Public Health and in February 2016, Dr David Roberts joined Cochrane UK for a six-month placement. David is undertaking a systematic review with the Cochrane Infectious Diseases Group and has also been active on the CUKI Trainees Advisory Group. In February, we were also joined by Bosun Hong, a dentist who is undertaking further training in maxillofacial surgery. She will be working with Cochrane UK for six months whilst preparing a systematic review but she will also be exploring opportunities for Cochrane UK to work with dentists and dental trainees.

On a smaller scale, there remain a range of projects for trainees who wish to work with Cochrane but who do not have months of time to devote. These opportunities, ranging from a few hours to a few weeks of work, are advertised on the website. Individuals are able to discuss projects with Dr Emma Plugge, Senior Fellow in Public Health, who is supervising these projects and leading on all matters relating to trainees.

### Community talks on Evidence-Based Medicine

As part of our communications and influencers strategy we identified and prioritized audiences with an interest in Cochrane. One such audience are citizens and in particular those with an interest in health. Our Senior Fellow in General Practice, Lynda Ware, is leading on this work and began by preparing a talk on Evidence-Based Medicine (EBM) to give to non-medical audiences. The talk lasts around 45 minutes and begins with a brief outline of the history of medical research leading up to the formation of the Cochrane Collaboration in 1993. This is followed by several examples of the relevance of EBM to everyday life such as looking for the truth behind newspaper headlines and searching for trustworthy information to inform personal health decisions.

Lynda has given four talks to local community groups including village groups, the Rotary and the Women's Institute (WI). The talks have been well received and there has been positive feedback afterwards. Discussions have been lively,

especially with the WI. Suggestions have been made for future bookings. There are further diary fixtures with three more WI groups and the Oxford branch of the University of the Third Age. An abbreviated version of the talk is available on the Cochrane website as a narrated slide show.

Discussions on how to develop the talk further are ongoing and we are seeking ways to ensure that this venture is scaled up for delivery to similar citizen groups across the UK through existing Cochrane networks. It is also hoped that it may form the starting point for a connection with local schools to talk to young people about the relevance of EBM and how it may be accessed.

### **Academic Clinical Fellows Course**

Three times a year we run a 3.5 day course for NIHR Academic Clinical Fellows (ACFs). The aim of the course is to develop leadership skills and to explain the principles of evidence-based decision-making and the critical appraisal skills that underlie the evaluation and synthesis of evidence. The course is provided for a modest fee to participants, this fee covering about fifty per cent of the course costs.

The course is organized in a University environment. We ran the course in April 2015 in Magdalen College, in September 2015 in Brasenose College and in January 2016 in Balliol College.

There were 56 participants who successfully completed the course and we have received consistently positive feedback from each of the cohorts.

“Excellent sessions run by highly experienced faculty that were extremely approachable. Particularly enjoyed the Leadership and Management component to the programme and strongly believe this will be useful to my future clinical academic practice and collaborations.”

“The course was very well organized and well run. It felt a real privilege to attend this course. The setting, tutors, course content, technical support, size of the group, catering was brilliant. Tutors communicated very well and encouraged lots of interesting and useful discussions. They were available during the breaks and after the sessions for further questions and discussions. Our group worked well together.”

“The most interesting educational sessions I can remember attending (and I spent 9 years studying so have attended a lot of teaching!). I think having a range of experts in the room at all times made a huge difference to the quality of debate, discussion and learning.”

“They (both sessions and course leaders) were inspirational and motivational. Medical Leadership was an unexpected and welcomed aspect of the course. All aspects were useful and immediately applicable to daily life using practical techniques.”

In September 2016 we plan to develop and run a similar course for NIHR Trainees from a non-medical profession as a pilot to gauge interest from this group and develop a tailored offering to meet their needs.



# Goal four: Building an effective and sustainable organization

## **Funding and Finance**

We were pleased to end the first year of our five-year funding period with a break-even financial position.

## **Staffing**

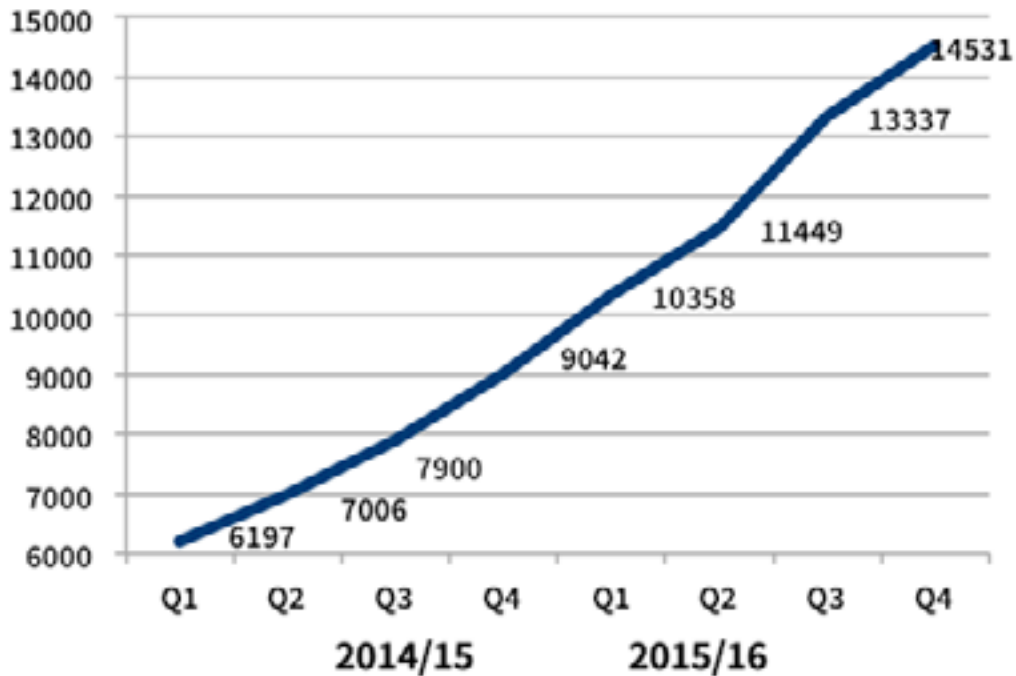
At Cochrane UK we have a small team of six core staff and are supported to deliver our projects and programmes by a faculty of Cochrane trainers, Fellows and Professional Systematic Reviewers. This provides a high level of expertise, whilst maintaining flexibility and control of staffing costs. This year we said goodbye to Carly Mole, our Programme Support Officer, who has been with Cochrane for six years. Janet Robertson, Information Assistant, left the team to move back into a patient-facing role and Holly Millward, Communications and Engagement Officer, moved on to a role with the Cochrane Central Executive Team.

We were delighted to welcome Anna Knurowska in the role of Programme Support Officer, Selena Ryan-Vig Knowledge and Engagement Officer and Jack Leahy Communications and Engagement Officer.

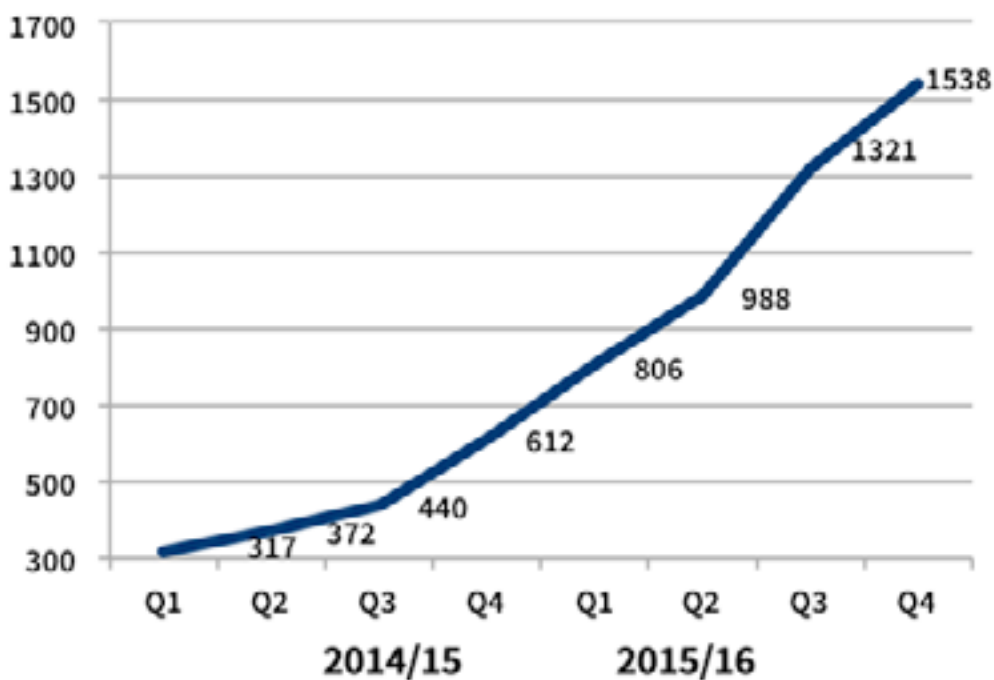


# Appendix one: Digital impact

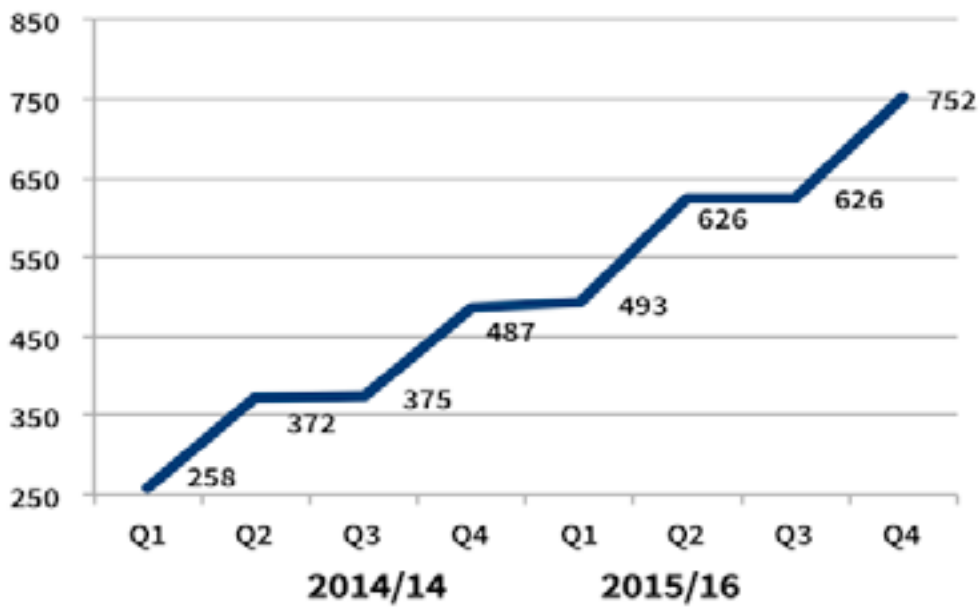
## Cochrane UK Twitter Followers



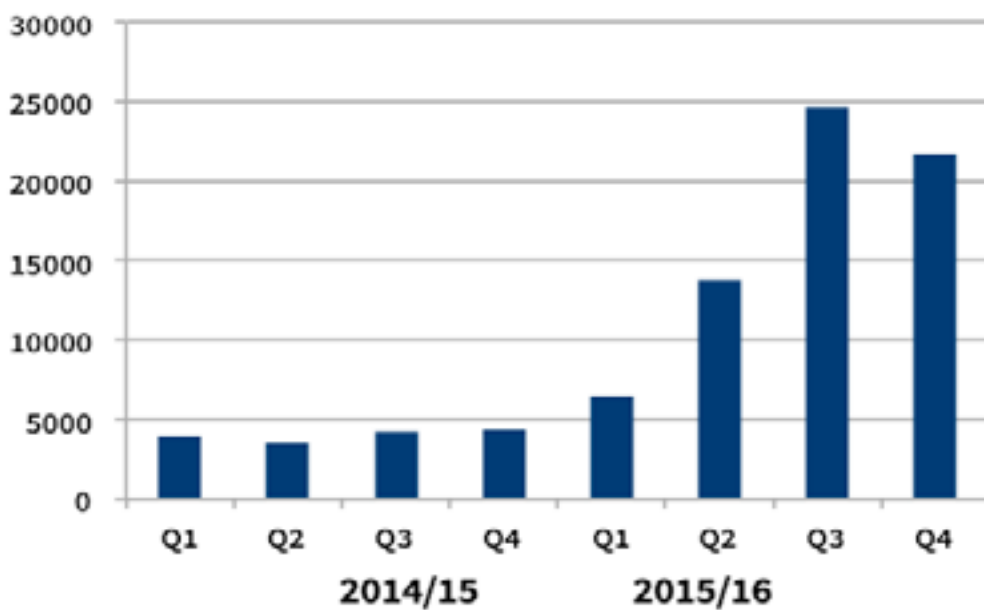
## Cochrane UK Facebook Like



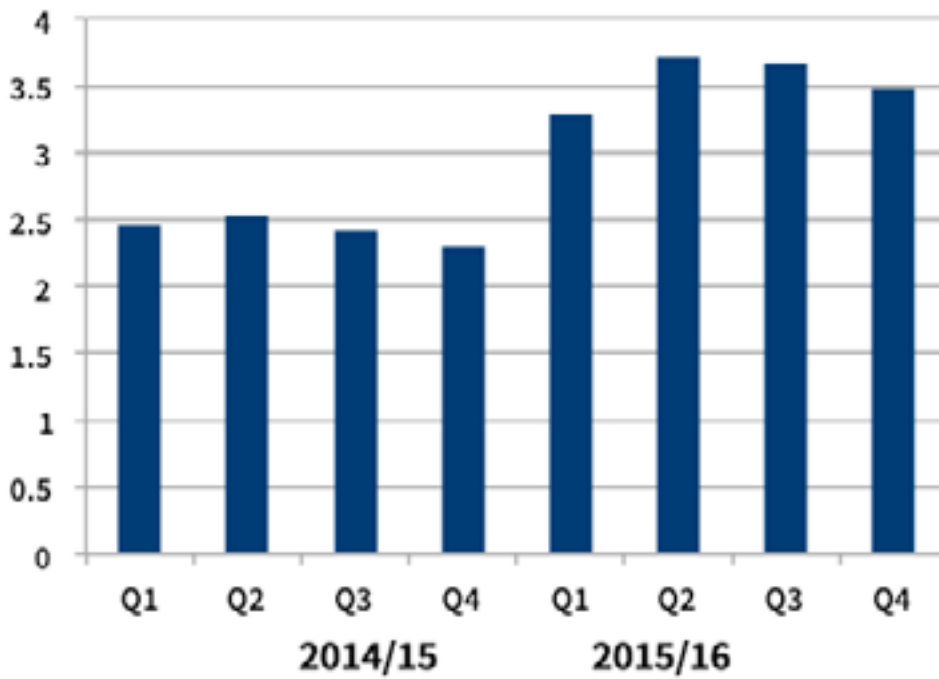
### Cochrane UK LinkedIn Followers



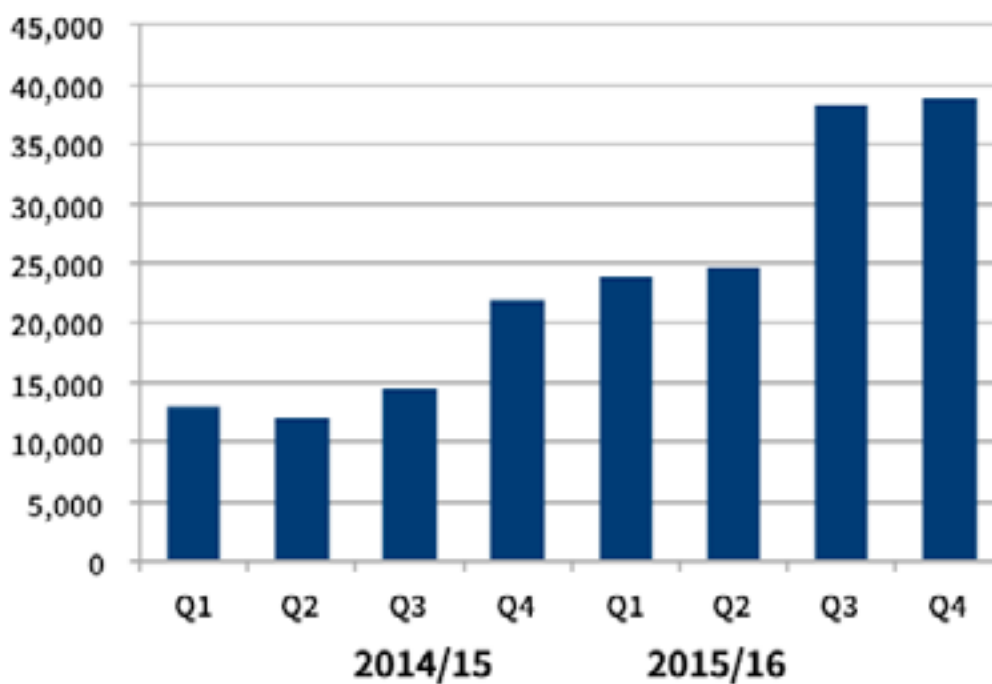
### uk.cochrane.org Number of Sessions



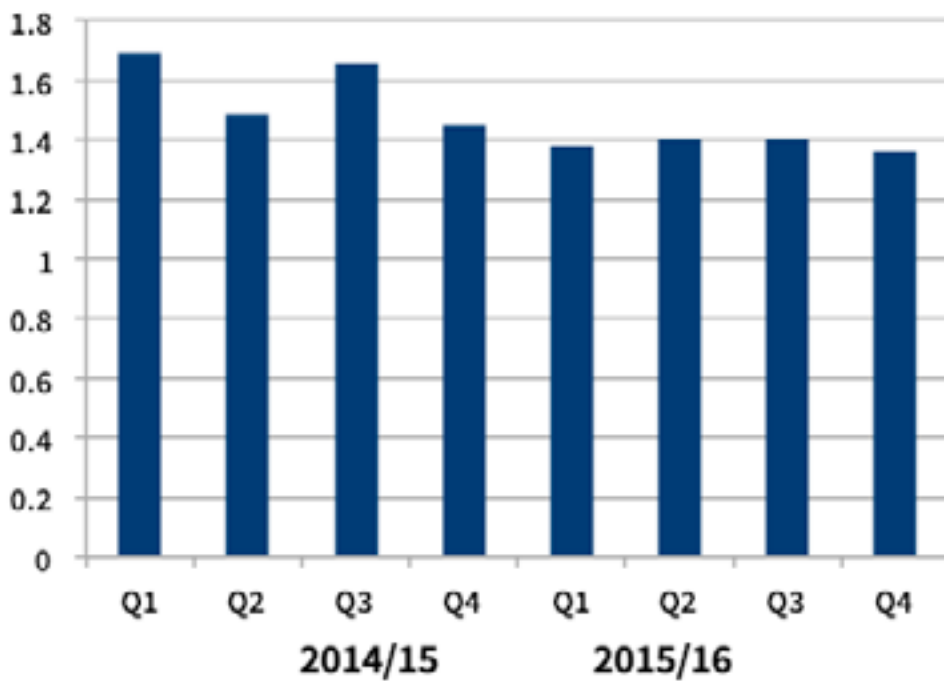
### uk.cochrane.org Pages per session



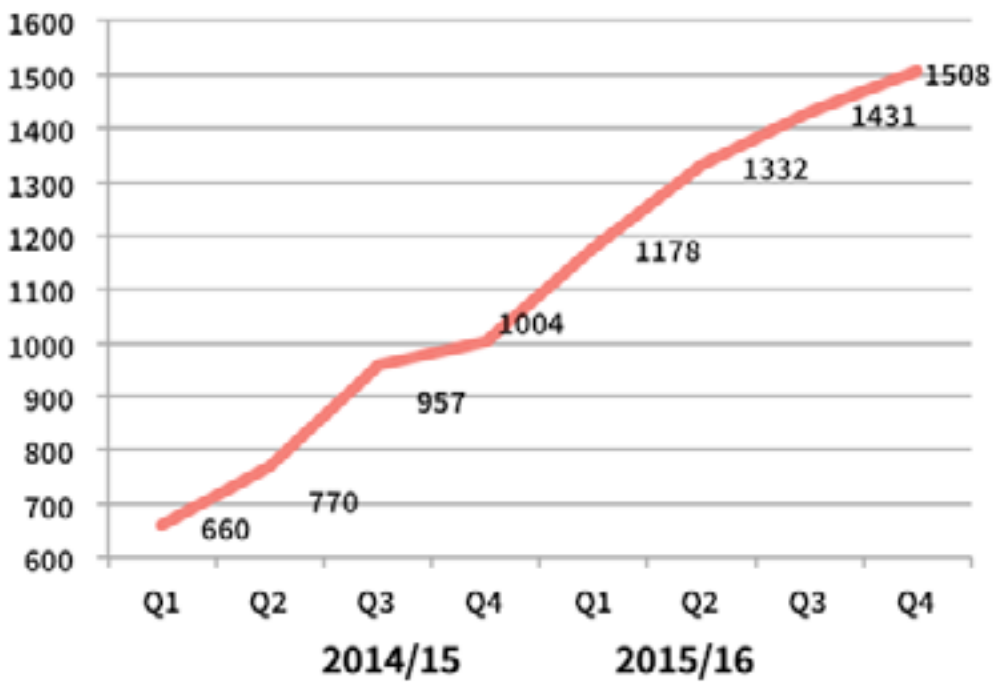
### Evidentlycochrane.net Number of sessions



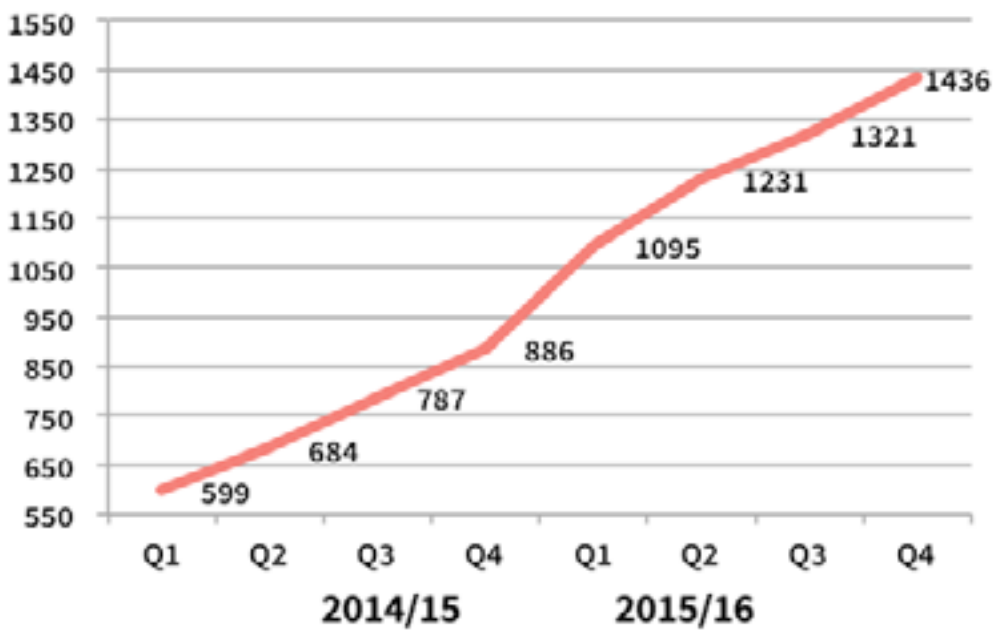
### Evidentlycochrane.net Pages per session



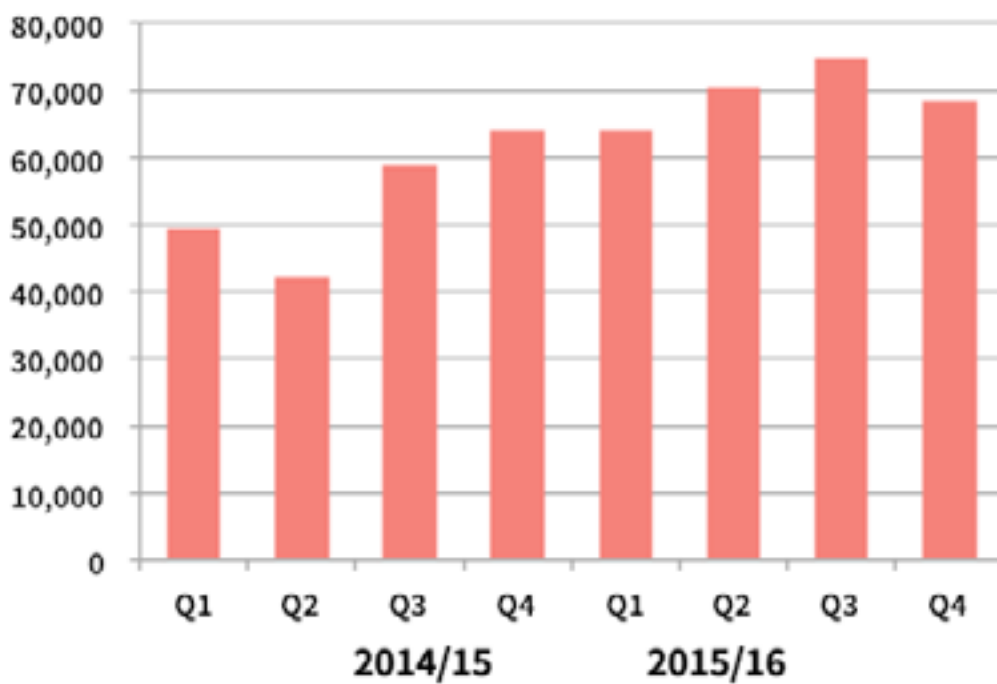
### Students 4 Best Evidence Twitter Followers



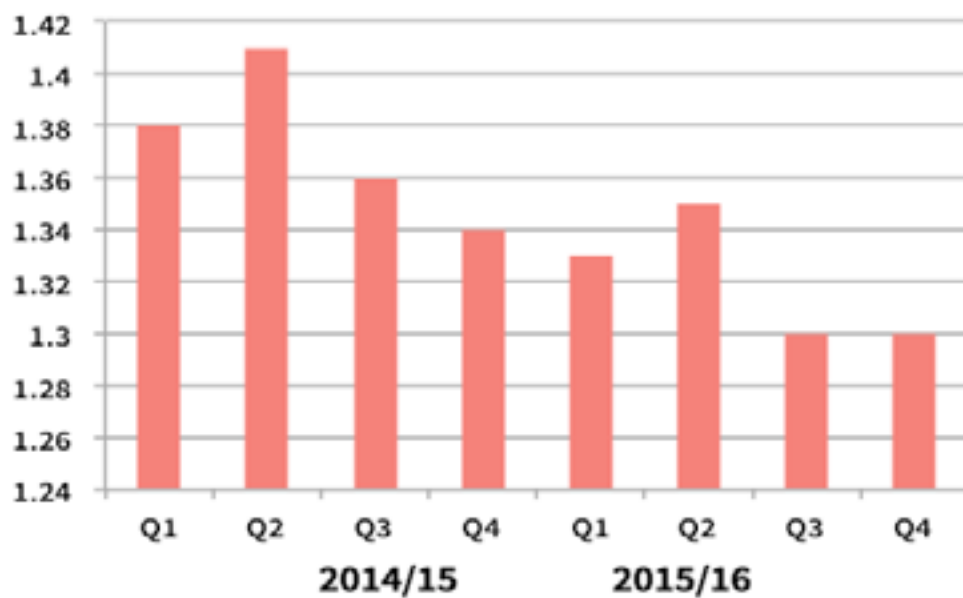
### Students 4 Best Evidence Facebook Likes



### Students4bestevidence.net Number of sessions



## Students4bestevidence.net Pages per session



## Appendix two: Impact case studies

# Are Cochrane reviews contributing evidence to prevent harm?

### Impact Case Study 1: Valproate – neurodevelopmental disorders

#### UK Medicines and Healthcare Products Regulatory Agency – Drug Safety Updates

A review by the Cochrane Epilepsy Group has contributed data supporting and strengthening evidence on warnings of harm related to medicines related to valproate use in pregnancy.

- Bromley R, Weston J, Adab N, Greenhalgh J, Sanniti A, McKay AJ, Tudur Smith C, Marson AG. Treatment for epilepsy in pregnancy: neurodevelopmental outcomes in the child. Cochrane Database of Systematic Reviews 2014, Issue 10. Art. No.: CD010236. DOI: 10.1002/14651858.CD010236.pub2

Previously, in the Drug Safety Update of January 2015, the UK Medicines and Healthcare Products Regulatory Agency (MRHA) reported that children exposed to valproate in utero are at high risk of developmental disorders and congenital malformations, citing evidence from this Cochrane Review (Available from: [https://www.gov.uk/government/uploads/system/uploads/attachment\\_data/file/409045/January\\_2015\\_Drug\\_Safety\\_Update.pdf](https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/409045/January_2015_Drug_Safety_Update.pdf)).

Action taken: Since this initial report and in order to improve awareness of the risks of valproate in pregnancy, the MHRA in the Drug Safety Update of February 2016 ([https://www.gov.uk/government/uploads/system/uploads/attachment\\_data/file/500974/DSU\\_Feb\\_2016\\_pdf\\_\\_2\\_.pdf](https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/500974/DSU_Feb_2016_pdf__2_.pdf)) has provided new communication materials (booklet for healthcare professionals, consultation checklist, guide and card to give to patients) to support discussion of risks with women of childbearing potential and girls who take valproate. The Cochrane Review is again cited as supporting evidence:

“Children exposed in utero to valproate are at a high risk of serious developmental disorders (in up to 30-40% of cases) and congenital malformations (in approximately 10% of cases).”

### Impact Case Study 2: Epoetin Beta – risk of retinopathy

#### UK Medicines and Healthcare Products Regulatory Agency – Drug Safety Updates

Two reviews by the Cochrane Neonatal Group have contributed data warning of the possible increased risk of retinopathy with epoetin beta in premature infants.

- Ohlsson A, Aher SM. Early erythropoietin for preventing red blood cell transfusion in preterm and/or low birth weight infants. Cochrane Database of Systematic Reviews 2014, Issue 4. Art. No.: CD004863. DOI: 10.1002/14651858.CD004863.pub4
- Aher SM, Ohlsson A. Late erythropoietin for preventing red blood cell transfusion in preterm and/or low birth weight infants. Cochrane Database of Systematic Reviews 2014, Issue 4. Art. No.: CD004868. DOI: 10.1002/14651858.CD004868.pub4.

Action taken: As reported in the MRHA’s Drug Safety Update of May 2015, this Cochrane evidence has been used to support the call for careful consideration of options for preventing anaemia of prematurity.

The summary of product characteristics for epoetin beta will now be amended to include a possible risk of retinopathy: ([https://www.gov.uk/government/uploads/system/uploads/attachment\\_data/file/429186/Drug\\_Safety\\_Update\\_May\\_2015.pdf](https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/429186/Drug_Safety_Update_May_2015.pdf))

### Impact Case Study 3: Stillbirth

#### MBRRACE-UK Perinatal Confidential Enquiry on stillbirth report – November 2015

Investigations, commissioned by the NHS Healthcare Quality Improvement Partnership, seeking to reduce the risk of stillbirth in the UK were carried out by MBRRACE-UK (Mothers and Babies: Reducing Risk Through Audits and Confidential Enquiries Across the UK), a team of academics, clinicians and charity representatives.

- Draper E, Kurinczuk JJ, Kenyon S, on behalf of the MBRRACE-UK Collaboration. MBRRACE-UK Perinatal Confidential Enquiry: term, singleton, normally formed, antepartum stillbirth. Leicester: The Infant Mortality and Morbidity Studies, Department of Health Sciences, University of Leicester; 2015, November. Available from: <https://www.npeu.ox.ac.uk/downloads/files/mbrpace-uk/reports/MBRRACE-UK%20Perinatal%20Report%202015.pdf>

Their report was directly informed by **two Cochrane Pregnancy & Childbirth** Reviews

“Unlike high risk pregnancies at extreme preterm gestational ages, there is a known intervention which is highly effective in preventing stillbirth without causing a concomitant increase in the risk of neonatal death, or severe morbidity, namely, induction of labour (Cochrane Review CD004945). A meta-analysis of RCTs demonstrates that routine induction of labour at term and post term reduces the risk of perinatal death by about 50%. Hence, the failure to identify or respond to antenatal risk factors at term which are associated with the risk of stillbirth represents a potential lost opportunity to prevent deaths.” (p28)

- Gülmezoglu AM, Crowther CA, Middleton P, Heatley E. Induction of labour for improving birth outcomes for women at or beyond term. Cochrane Database of Systematic Reviews 2012, Issue 6. Art. No.: CD004945. DOI: 10.1002/14651858.CD004945.pub3

“There is clear evidence that sensitive and thoughtful postnatal care really does make a difference (Cochrane Review CD000452) and while it will not take away the pain and shock of what has happened, it can provide some comfort and can play an important part in helping parents to come to terms with what has happened.” (p51)

- Koopmans L, Wilson T, Cacciatore J, Flenady V. Support for mothers, fathers and families after perinatal death. Cochrane Database of Systematic Reviews 2013, Issue 6. Art. No.: CD000452. DOI: 10.1002/14651858.CD000452.pub3

#### Action

The MBRRACE-UK report on perinatal mortality includes key areas for action which are mapped to evidence from relevant NICE and NICE accredited Royal College of Obstetricians and Gynaecologists (RCOG) guidelines; these have been informed by several Cochrane Pregnancy & Childbirth Reviews:



**Key areas for action – from the report****For Policy-makers, Service Planners, Commissioners and Professional Organizations**

Need for development of guidelines for induction of labour following diagnosis of intrauterine death.

- Jozwiak M, Bloemenkamp KWM, Kelly AJ, Mol BWJ, Irion O, Bouvain M. Mechanical methods for induction of labour. *Cochrane Database of Systematic Reviews* 2012, Issue 3. Art. No.: CD001233. DOI: 10.1002/14651858.CD001233.pub2 (informed RCOG Green-top Guideline no. 55)

“Mechanical methods of induction might increase the risk of ascending infection in the presence of intrauterine fetal death” p14

**For Medical Directors, Clinical Directors, Heads of Midwifery and Clinical Service Managers**

Need to implement existing national guidance:

Routine measurement of growth by symphysis fundal height measurement and plotting measure on a growth chart.

- Bricker L, Neilson JP, Dowswell T. Routine ultrasound in late pregnancy (after 24 weeks' gestation). *Cochrane Database of Systematic Reviews* 2008, Issue 4. Art. No.: CD001451. DOI: 10.1002/14651858.CD001451.pub3. (informed NICE CG62 and RCOG GTG no. 31)

Management of reduced fetal movements and identification of additional risk factors – prompt referral for an ultrasound scan and senior obstetric review

- Grivell RM, Alfirevic Z, Gyte GML, Devane D. Antenatal cardiotocography for fetal assessment. *Cochrane Database of Systematic Reviews* 2012, Issue 12. Art. No.: CD007863. DOI: 10.1002/14651858.CD007863.pub3 (informed RCOG GTGs no. 31 and no. 57)

**Maternal risk factors**

- Chamberlain C, O'Mara-Eves A, Oliver S, Caird JR, Perlen SM, Eades SJ, Thomas J. Psychosocial interventions for supporting women to stop smoking in pregnancy. *Cochrane Database of Systematic Reviews* 2013, Issue 10. Art. No.: CD001055. DOI: 10.1002/14651858.CD001055.pub4 (informed NICE CG62 and RCOG GTGs no. 31 and 63)
- Stade BC, Bailey C, Dzendoletas D, Sgro M, Dowswell T, Bennett D. Psychological and/or educational interventions for reducing alcohol consumption in pregnant women and women planning pregnancy. *Cochrane Database of Systematic Reviews* 2009, Issue 2. Art. No.: CD004228. DOI: 10.1002/14651858.CD004228.pub2 (informed NICE CG192)
- Turnbull C, Osborn DA. Home visits during pregnancy and after birth for women with an alcohol or drug problem. *Cochrane Database of Systematic Reviews* 2012, Issue 1. Art. No.: CD004456. DOI: 10.1002/14651858.CD004456.pub3. (informed NICE CG192)
- Gagnon AJ, Sandall J. Individual or group antenatal education for childbirth or parenthood, or both. *Cochrane Database of Systematic Reviews* 2007, Issue 3. Art. No.: CD002869. DOI: 10.1002/14651858.CD002869.pub2 (informed NICE CG192)

**Bereavement care**

- Koopmans L, Wilson T, Cacciatore J, Flenady V. Support for mothers, fathers and families after perinatal death. *Cochrane Database of Systematic Reviews* 2013, Issue 6. Art. No.: CD000452. DOI: 10.1002/14651858.CD000452.pub3 (informed RCOG GTG no. 55)

“Some parents develop prolonged psychological problems after stillbirth. This appears to be much more likely if professional support is not given, but there is a paucity of evidence from randomised trials that address the benefits and pitfalls of psychological interventions after perinatal death”. p19.

**Follow-up care**

- Hodnett ED. Continuity of caregivers for care during pregnancy and childbirth. *Cochrane Database of Systematic Reviews* 2008, Issue 4. Art. No.: CD000062. DOI: 10.1002/14651858.CD000062.pub2 (informed NICE CG62)
- UK Government pledge to halve the stillbirth rate by 2030

- Guardian article: “Jeremy Hunt pledged last Friday to halve the stillbirth rate by 2030. But this report (MBRRACE-UK, Nov 2015) tells us hundreds of deaths could be avoided today simply by applying existing antenatal guidelines.” <http://www.theguardian.com/politics/2015/nov/13/jeremy-hunt-cut-number-stillbirths-neonatal-deaths>
- Ten Cochrane Pregnancy & Childbirth Reviews have informed the latest antenatal guidelines published by NICE which include recommendations aimed at reducing stillbirths:
- National Collaborating Centre for Women's and Children's Health, National Institute for Health and Care Excellence (commissioner). Preterm labour and birth. London: National Institute for Health and Care Excellence; 2015. (NICE NG25). [Issued November 2015]. Available from: <https://www.nice.org.uk/guidance/ng25>
- Antenatal corticosteroids for accelerating fetal lung maturation for women at risk of preterm birth (CD004454)
- Antibiotics for preterm rupture of membranes (CD001058)
- Caesarean section versus vaginal delivery for preterm birth in singletons (CD000078)
- Cervical assessment by ultrasound for preventing preterm delivery (CD007235)
- Cervical stitch (cerclage) for preventing preterm birth in singleton pregnancy (CD008991)
- Effect of timing of umbilical cord clamping and other strategies to influence placental transfusion at preterm birth on maternal and infant outcomes (CD003248)
- Magnesium sulphate for women at risk of preterm birth for neuroprotection of the fetus (CD004661)
- Prenatal administration of progesterone for preventing preterm birth in women considered to be at risk of preterm birth (CD004947)
- Repeat doses of prenatal corticosteroids for women at risk of preterm birth for improving neonatal health outcomes (CD003935)
- Support during pregnancy for women at increased risk of low birthweight babies (CD000198)

# Are Cochrane reviews being used to promote health and wellbeing?

## Impact Case Study 4: Child health care

### The UK Healthy Child Programme

Cochrane provided evidence (in 45 reviews) of ‘what works’ in child health care to inform a major UK public health programme implemented in October 2015 (<https://www.gov.uk/government/publications/healthy-child-programme-rapid-review-to-update-evidence>).

The ‘Healthy Child Programme’ (HCP) is the main universal health service for improving the health and wellbeing of children, through:

- health and development reviews
- health promotion
- parenting support
- screening and immunisation programmes

From 1 October 2015, local authorities took over responsibility from NHS England for planning and paying for public health services for babies and children up to five years old. Public Health England commissioned a rapid review of new evidence to support this transition and to ensure that the Healthy Child Programme was underpinned by up-to-date evidence of ‘what works’, as the programme was last updated in 2009.

This rapid review, published in March 2015, was informed by 45 Cochrane reviews from seven Cochrane review groups (5 UK based)

([https://www.gov.uk/government/uploads/system/uploads/attachment\\_data/file/429740/150520RapidReviewHealthyChildProg\\_UPDATE\\_poisons\\_final.pdf](https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/429740/150520RapidReviewHealthyChildProg_UPDATE_poisons_final.pdf))

- Pregnancy & Childbirth (23)
- Developmental, Psychosocial & Learning Problems (11)
- Injuries (4)
- Tobacco Addiction (3)
- Heart (2)
- Public Health (1)
- Neonatal (1)

## Impact case study 5: Breastfeeding

### The Lancet Series on breastfeeding

The Lancet: “Increasing breastfeeding worldwide could prevent over 800,000 child deaths and 20,000 deaths from breast cancer every year.”

- Victora CG, Bahl R, Barros AJD, Franca GVA, Horton S, Krusevec J, Murch S, Sankar MJ, Walker N, Rollins NC, for The Lancet Breastfeeding Series Group. Breastfeeding in the 21st Century: epidemiology, mechanisms and lifelong effect. (Breastfeeding Series 1). Lancet 2016; 387: 475-90. Available from: [www.thelancet.com/series/breastfeeding](http://www.thelancet.com/series/breastfeeding)

Two Cochrane Pregnancy & Childbirth Reviews have helped to inform this initiative to increase breastfeeding worldwide:

- Kramer MS, Kakuma R. Optimal duration of exclusive breastfeeding. Cochrane Database of Systematic Reviews 2012, Issue 8. Art. No.: CD003517. DOI: 10.1002/14651858.CD003517.pub
- Renfrew MJ, McCormick FM, Wade A, Quinn B, Dowswell T. Support for healthy breastfeeding mothers with healthy term babies. Cochrane Database of Systematic Reviews 2012, Issue 5. Art. No.: CD001141. DOI: 10.1002/14651858.CD001141.pub4.

## Are Cochrane reviews helping to make a difference?

### Generating a portfolio of ‘impact stories’

In addition to tracking the use of Cochrane evidence to inform policy documents, as seen above, we are now gathering a portfolio of ‘impact stories’ where Cochrane evidence is:

- helping to shape ideas and influence policy development in health care;
- helping to change clinical practice;
- leading to new research
- identifying promising interventions that warrant further investigation in clinical practice, research or guideline development;
- indicating where further research is no longer necessary;
- or influencing the withdrawal of ineffective or unnecessary interventions

We are seeking to follow the evidence trail from the initial use of Cochrane evidence through to any subsequent changes in policy or practice and charting any resulting effects on health status of patients, the wider population or health service delivery, to understand better the impact of such evidence on the health and wellbeing of the nation.

### 1 Cochrane evidence helping to shape ideas and influence policy development in health care

#### (i) NHS Five Year Forward View - National Maternity Review

- Cumberlege J (Chair), on behalf of the National Maternity Review Team, NHS England. National Maternity Review: Better Births – improving outcomes of maternity services in England. A Five Year Forward View for maternity care. London: NHS England; 2016, February. Available from: <https://www.england.nhs.uk/wp-content/uploads/2016/02/national-maternity-review-report.pdf>

The National Maternity Review for England has been directly informed by a Cochrane Pregnancy & Childbirth Review.

- Sandall J, Soltani H, Gates S, Shennan A, Devane D. Midwife-led continuity models versus other models of care for childbearing women. Cochrane Database of Systematic Reviews 2016, Issue 4. Art. No.: CD004667. DOI: 10.1002/14651858.CD004667.pub5

#### Coordination and continuity

4.14 “Just as importantly for safety and clinical effectiveness, if too many health professionals are involved without proper coordination, there may not be effective oversight of the care provided. Evidence shows that continuity models have an impact on improving safety, clinical outcomes, as well as a better experience...Pre-term births have also been found to be reduced through continuity of the care“ p46

The Maternity Review highlights seven key priorities including personalised care and continuity of care. Implementation of one of these priorities, continuity of care, was a key issue addressed in a related report of a recent symposium at Green Templeton College, Oxford by the Sheila Kitzinger Study Group, curated by the President of the Royal College of Midwives, which was informed by evidence from this Cochrane Review.

- Sandall J, Coxon K, Mackintosh N, Rayment-Jones H, Locock L, Page L, on behalf of the Sheila Kitzinger symposium. Relationships: the pathway to safe, high-quality maternity care. Report from the Sheila Kitzinger symposium at Green Templeton College, October 2015. Oxford: Green Templeton College; 2016. Available from: [www.gtc.ox.ac.uk/images/stories/academic/skp\\_report.pdf](http://www.gtc.ox.ac.uk/images/stories/academic/skp_report.pdf)

The National Maternity Review has also been informed by NICE clinical guideline CG190 (Intrapartum care: care of healthy women and their babies during childbirth) – which was itself informed by 38 Cochrane Pregnancy & Childbirth Reviews:

- Absorbable suture materials for primary repair of episiotomy and second degree tears (CD000006)
- Active versus expectant management in the third stage of labour (CD000007)
- Amnioinfusion for meconium-stained liquor in labour (CD000014)
- Amniotomy for shortening spontaneous labour (CD006167)
- Antenatal education for self-diagnosis of the onset of active labour at term (CD000935)
- Antibiotics for prelabour rupture of membranes at or near term (CD001807)
- Aromatherapy for pain management in labour (CD009215)
- Cardiotocography versus intermittent auscultation of fetal heart on admission to labour ward for assessment of fetal wellbeing (CD005122)
- Combined spinal-epidural versus epidural analgesia in labour (CD003401)
- Complementary and alternative therapies for pain management in labour (CD003521)
- Continuity of caregivers for care during pregnancy and childbirth (CD000062)
- Continuous and interrupted suturing techniques for repair of episiotomy or second-degree tears (CD000947)
- Continuous cardiotocography (CTG) as a form of electronic fetal monitoring (EFM) for fetal assessment during labour (CD006066)
- Continuous support for women during childbirth (CD003766)
- Discontinuation of epidural analgesia late in labour for reducing the adverse delivery outcomes associated with epidural analgesia (CD004457)
- Effect of timing of umbilical cord clamping of term infants on maternal and neonatal outcomes (CD004074)
- Epidural versus non-epidural or no analgesia in labour (CD000331)
- Episiotomy for vaginal birth (CD000081).
- Fetal electrocardiogram (ECG) for fetal monitoring during labour (CD000116)
- Immersion in water in labour and birth (CD000111)
- Interventions for promoting the initiation of breastfeeding (CD001688)
- Intrapartum fetal scalp lactate sampling for fetal assessment in the presence of a non-reassuring fetal heart rate trace (CD006174)
- Labour assessment programs to delay admission to labour wards (CD000936)
- Massage, reflexology and other manual methods for pain management in labour (CD009290)
- Planned early birth versus expectant management (waiting) for prelabour rupture of membranes at term (37 weeks or more) (CD005302)
- Position in the second stage of labour for women without epidural anaesthesia (CD002006)
- Prophylactic antibiotics for manual removal of retained placenta in vaginal birth (CD004904)
- Prophylactic ergometrine-oxytocin versus oxytocin for the third stage of labour (CD000201)
- Prophylactic intravenous preloading for regional analgesia in labour (CD000175)
- Rectal analgesia for pain from perineal trauma following childbirth (CD003931)
- Relaxation techniques for pain management in labour (CD009514)
- Routine prophylactic drugs in normal labour for reducing gastric aspiration and its effects (CD005298)
- Soft versus rigid vacuum extractor cups for assisted vaginal delivery (CD000446)
- Treatment for primary postpartum haemorrhage (CD003249)
- Types of intra-muscular opioids for maternal pain relief in labour (CD001237)
- Umbilical vein injection for management of retained placenta (CD001337)
- Vacuum extraction versus forceps for assisted vaginal delivery (CD000224)
- Vaginal chlorhexidine during labour for preventing maternal and neonatal infections (excluding Group B Streptococcal and HIV) (CD004070)

The Cochrane Pregnancy and Childbirth Review on midwife-led continuity models of care has also influenced other policy developments (<http://www.cochrane.org/news/cochrane-making-difference-midwifery>):

For example, the findings were cited as a key piece of evidence to inform models of care in the first National Maternity Strategy for Ireland, which was published in January 2016.

- Department of Health, Ireland. Creating a better future together: National Maternity Strategy 2016-2026. Dublin: Department of Health, Ireland; 2016, January. Available from: <http://health.gov.ie/wp-content/uploads/2016/01/Final-version-27.01.16.pdf>

## 1 Cochrane evidence: helping to shape ideas and influence policy development in health care

### (ii) UK Government Review on Antimicrobial Resistance

In July 2014, the UK Government commissioned the Review on Antimicrobial Resistance, chaired by Jim O’Neill, in collaboration with the Wellcome Trust. The final report of the Review, published in 2016, provides an overview of solutions that should be implemented to curtail unnecessary use of antimicrobials and increase the supply of new antimicrobials, including the need to introduce rapid diagnostics and vaccines, improve global surveillance, improve infection control, find alternative treatments and address the use of antibiotics in agriculture.

- O’Neill, J. Tackling drug-resistant infections globally: final report and recommendations. London: Review on Antimicrobial Resistance, Wellcome Trust, HM Government; 2016, May. Available from: [http://amr-review.org/sites/default/files/160525\\_Final%20paper\\_with%20cover.pdf](http://amr-review.org/sites/default/files/160525_Final%20paper_with%20cover.pdf)

A commissioned study on the impact of diagnostics and new treatments against tuberculosis has been used as one of the supporting documents for the O’Neill Review.

- Arinaminpathy N. Outline of the Tuberculosis transmission model. London: Review on Antimicrobial Resistance; 2016. Available from: [http://amr-review.org/sites/default/files/Sl\\_TB3.pdf](http://amr-review.org/sites/default/files/Sl_TB3.pdf)

This study has been informed by evidence from a Cochrane Infectious Diseases Diagnostic Test Accuracy Review:

“delays in recognizing a patient’s drug resistance mean missed opportunities for controlling the transmission of MDR-TB. Therefore, there is a need for new diagnostic tests that can detect drug resistance at the same time as providing a TB diagnosis (so-called ‘upfront’ DST), so that a patient can be initiated on the correct treatment from the outset.”

New and emerging technology offers fresh prospects for addressing these needs. For example, GeneXpert is a rapid molecular diagnostic test that offers diagnosis for TB and for rifampicin-resistance (often a good correlate for MDR-TB) in a matter of hours...In future, with sufficiently lowered costs, such tests could make it feasible for most patients to know their drug resistance status at the point of TB diagnosis.” p1

- Steingart KR, Schiller I, Horne DJ, Pai M, Boehme CC, Dendukuri N. Xpert® MTB/RIF assay for pulmonary tuberculosis and rifampicin resistance in adults. Cochrane Database of Systematic Reviews 2014, Issue 1. Art. No.: CD009593. DOI: 10.1002/14651858.CD009593.pub3.

An interim report for the Antimicrobial Resistance Review was also informed by evidence from a Cochrane Effective Practice & Organisation of Care Review which identified that benefits from effective interventions designed to stop unnecessary use of antibiotics are short-lived, pointing to the need to try to change the way prescribers and patients act:

- O’Neill J. Rapid Diagnostics: stopping unnecessary use of antibiotics. Chapter 5: We can improve our use of antibiotics today based on existing diagnostics, coupled with public education. London: Review on Antimicrobial Resistance; 2016. p25. Available from: <http://amr-review.org/sites/default/files/Rapid%20Diagnostics%20-%20Stopping%20Unnecessary%20use%20of%20Antibiotics.pdf>

“...a systematic review examining interventions to improve antibiotic prescribing practices for hospital inpatients showed that many interventions designed to stop antimicrobial resistance have a positive impact. However in most cases when prescriptions levels are measured six



months later most of these benefits had gone and there were no significant differences at 12 or 24 months. This shows the need for careful and well thought out change, interventions should not simply be short term, but should try to change the way prescribers and patients act, as well as changing the culture in hospitals.” p25.

- Davey P, Brown E, Charani E, Fenelon L, Gould IM, Holmes A, Ramsay CR, Wiffen PJ, Wilcox M. Interventions to improve antibiotic prescribing practices for hospital inpatients. Cochrane Database of Systematic Reviews 2013, Issue 4. Art. No.: CD003543. DOI: 10.1002/14651858.CD003543.pub3.

## 1 Cochrane evidence: helping to shape ideas and influence policy development in health care

### (iii) Kings’ Fund report – Better value in the NHS

This King’s Fund report charts opportunities for the NHS to get better value from its budget through changes in clinical practice based on evidence on how better care might be delivered. The report has been informed by 13 Cochrane Reviews (1 Cochrane Bone, Joint & Muscle Trauma; 3 Consumers & Communication; 2 Airways; 1 Pain, Palliative & Supportive Care; 4 Effective Practice & Organisation of Care; 1 Musculoskeletal; 1 Acute Respiratory Infections).

- Alderwick H, Robertson R, Appleby J, Dunn P, Maguire D. Better value in the NHS: the role of changes in clinical practice. London: The King’s Fund; 2015, July. Available from: [http://www.kingsfund.org.uk/sites/files/kf/field/field\\_publication\\_file/better-value-nhs-Kings-Fund-July%202015.pdf](http://www.kingsfund.org.uk/sites/files/kf/field/field_publication_file/better-value-nhs-Kings-Fund-July%202015.pdf)

### Overprescribing

“Patients are often prescribed drugs when these are not needed, or are prescribed drugs which are likely to be ineffective. This is the problem of overprescribing, which creates unnecessary risks for patients while wasting NHS resources... Overprescribing of antibiotics in primary care for patients with respiratory tract infections, such as coughs, colds and sore throats. While antibiotics offer little benefit for patients with respiratory tract infections, they are commonly prescribed by GPs.” p53

“Patients are often prescribed antibiotics after visiting their GP with coughs, colds and sore throats, despite guidelines and evidence that the modest benefits do not justify their use for these conditions.”p54

- Spinks A, Glasziou PP, Del Mar CB. Antibiotics for sore throat. Cochrane Database of Systematic Reviews 2013, Issue 11. Art. No.: CD000023. DOI: 10.1002/14651858.CD000023.pub4

### Preventable harm - preventing falls in the NHS

“Reviews have suggested that falls prevention programmes that target multiple individual risk factors (multifactorial assessment and intervention) can reduce the number of falls by around 20 to 30 per cent.” p68

- Cameron ID, Gillespie LD, Robertson MC, Murray GR, Hill KD, Cumming RG, Kerse N. Interventions for preventing falls in older people in care facilities and hospitals. Cochrane Database of Systematic Reviews 2012, Issue 12. Art. No.: CD005465. DOI: 10.1002/14651858.CD005465.pub3

### Care of long-term conditions – earlier detection and diagnosis

“Many patients with undiagnosed long-term conditions do not realise they have symptoms and consequently do not go to their GP surgery for diagnosis. There is no strong evidence on what works to identify undiagnosed patients in the community and much debate as to the best approach...a systematic review of the effectiveness of general health checks found that they increased new diagnoses but had no significant effect on morbidity or mortality.” p76

- Krogsbøll LT, Jørgensen KJ, Grønhøj Larsen C, Gøtzsche PC. General health checks in adults for reducing morbidity and mortality from disease. Cochrane Database of Systematic Reviews 2012, Issue 10. Art. No.: CD009009. DOI: 10.1002/14651858.CD009009.pub2

### Care of long-term conditions - involving patients in decisions about their care

“Discussions between clinicians and patients through which they jointly agree a personalised care plan have been shown to benefit patients’ mental and physical health and improve their ability to manage their own conditions.” p77

- Coulter A, Entwistle VA, Eccles A, Ryan S, Shepperd S, Perera R. Personalised care planning for adults with chronic or long-term health conditions. Cochrane Database of Systematic Reviews 2015, Issue 3. Art. No.: CD010523. DOI: 10.1002/14651858.CD010523.pub2

“When patients are helped to make choices that better align with their preferences, they may actually choose to have less treatment. For example, a systematic review of evidence found that patients who used decision aids were less likely to opt for elective surgery.” p77

- Stacey D, Légaré F, Col NF, Bennett CL, Barry MJ, Eden KB, Holmes-Rovner M, Llewellyn-Thomas H, Lyddiatt A, Thomson R, Trevena L, Wu JHC. Decision aids for people facing health treatment or screening decisions. Cochrane Database of Systematic Reviews 2014, Issue 1. Art. No.: CD001431. DOI: 10.1002/14651858.CD001431.pub4

### Care of long-term conditions - supporting patients to manage their own health

“The effectiveness of self-management programmes varies for different long-term conditions ...for adults with asthma they [self-management programmes] can improve health outcomes and reduce health service use (when accompanied by regular medical reviews and care planning).” p78

- Gibson PG, Powell H, Wilson A, Abramson MJ, Haywood P, Bauman A, Hensley MJ, Walters EH, Roberts JLL. Self-management education and regular practitioner review for adults with asthma. Cochrane Database of Systematic Reviews 2002, Issue 3. Art. No.: CD001117. DOI: 10.1002/14651858.CD001117

“For COPD there is evidence that they improve health-related quality of life measures and reduce hospital admissions.” p78

- Zwerink M, Brusse-Keizer M, van der Valk PDLPM, Zielhuis GA, Monninkhof EM, van der Palen J, Frith PA, Effing T. Self-management for patients with chronic obstructive pulmonary disease. Cochrane Database of Systematic Reviews 2014, Issue 3. Art. No.: CD002990. DOI: 10.1002/14651858.CD002990.pub3



“However, there is less evidence of them having a positive impact on patients with osteoarthritis.” p78

- Kroon FPB, van der Burg LRA, Buchbinder R, Osborne RH, Johnston RV, Pitt V. Self-management education programmes for osteoarthritis. Cochrane Database of Systematic Reviews 2014, Issue 1. Art. No.: CD008963. DOI: 10.1002/14651858.CD008963.pub2

#### Care of older people living with frailty and complex needs – tackling problematic polypharmacy

“There is some evidence that medication reviews for patients in hospital can reduce future A&E contacts, although the effect on readmissions and mortality is uncertain, as is cost-effectiveness” p88

- Christensen M, Lundh A. Medication review in hospitalised patients to reduce morbidity and mortality. Cochrane Database of Systematic Reviews 2016, Issue 2. Art. No.: CD008986. DOI: 10.1002/14651858.CD008986.pub3.

“Similarly, multifaceted pharmaceutical care interventions and computerised decision support may reduce inappropriate prescribing and medication-related problems, but their impact on clinical outcomes is unclear” p88

- Patterson SM, Cadogan CA, Kerse N, Cardwell CR, Bradley MC, Ryan C, Hughes C. Interventions to improve the appropriate use of polypharmacy for older people. Cochrane Database of Systematic Reviews 2014, Issue 10. Art. No.: CD008165. DOI: 10.1002/14651858.CD008165.pub3

#### Care of older people living with frailty and complex needs - better hospital discharge and reablement

“Structured discharge plans, developed before patients leave hospital, can lead to reductions in hospital length of stay and readmission rates for older people admitted with a medical condition.” p 91

- Gonçalves-Bradley DC, Lannin NA, Clemson LM, Cameron ID, Shepperd S. Discharge planning from hospital. Cochrane Database of Systematic Reviews 2016, Issue 1. Art. No.: CD000313. DOI: 10.1002/14651858.CD000313.pub5

#### End-of-life care - reducing time spent in hospital at the end of life

“A systematic review of evidence on the use of home-based palliative care found that it can more than double the chance of a patient dying at home and leads to symptoms being better managed.” p95

- Gomes B, Calanzani N, Curiale V, McCrone P, Higginson IJ. Effectiveness and cost-effectiveness of home palliative care services for adults with advanced illness and their caregivers. Cochrane Database of Systematic Reviews 2013, Issue 6. Art. No.: CD007760. DOI: 10.1002/14651858.CD007760.pub2

#### End-of-life care - training generalist staff and others in end-of-life care

“In addition to training health and social care staff, it is important to consider the needs of the family members and informal carers who look after relatives and friends at the end of life... systematic reviews highlight the lack of support for informal carers to develop practical skills to care for their dying relative.” p100

- Candy B, Jones L, Drake R, Leurent B, King M. Interventions for supporting informal caregivers of patients in the terminal phase of a disease. Cochrane Database of Systematic Reviews 2011, Issue 6. Art. No.: CD007617. DOI: 10.1002/14651858.CD007617.pub2

## 2 Cochrane evidence: helping to change clinical practice

### (i) Responsible antibiotic prescribing

In the light of the O'Neill review on antimicrobial resistance, which promotes the use of rapid diagnostics coupled with public education to reduce unnecessary use of antibiotics, a GP surgery has implemented point-of-care fingerprick blood tests to help practitioners decide whether antibiotics are really necessary for patients who visit with respiratory infections.

- Cross L, Zimmel D. Responsible antibiotic prescribing in primary care: implementing Point-of-Care (POC) C-reactive protein (CRP) testing in the management of acute lower respiratory tract infection (LRTI). Bushey, Hertfordshire: Attenborough Surgery; 2016.
- Aabenhus R, Jensen JUS, Jørgensen KJ, Hróbjartsson A, Bjerrum L. Biomarkers as point-of-care tests to guide prescription of antibiotics in patients with acute respiratory infections in primary care. *Cochrane Database of Systematic Reviews* 2014, Issue 11. Art. No.: CD010130. DOI: 10.1002/14651858.CD010130.pub2

and a NICE guideline (CG191), which was itself informed by pre-publication data from the Cochrane biomarkers review and a second Cochrane Review:

- Schuetz P, Müller B, Christ-Crain M, Stolz D, Tamm M, Bouadma L, Luyt CE, Wolff M, Chastre J, Tubach F, Kristoffersen KB, Burkhardt O, Welte T, Schroeder S, Nobre V, Wei L, Bhatnagar N, Bucher HC, Briel M. Procalcitonin to initiate or discontinue antibiotics in acute respiratory tract infections. *Cochrane Database of Systematic Reviews* 2012, Issue 9. Art. No.: CD007498. DOI: 10.1002/14651858.CD007498.pub2
- National Clinical Guideline Centre. National Institute for Health and Care Excellence (commissioner). Pneumonia: diagnosis and management of community- and hospital-acquired pneumonia in adults. London: National Institute for Health and Care Excellence; 2014 (NICE CG191) [Issued December 2014]. Available from: <https://www.nice.org.uk/guidance/cg191/evidence/cg191-pneumonia-full-guideline3>

Michael Moore, Professor of Primary Care Research and National Champion for Antimicrobial Stewardship at the Royal College of General Practitioners, in a podcast accompanying the NICE guideline, specifically mentions the Cochrane Acute Respiratory Infections biomarkers review that has influenced the NICE recommendation that a C-reactive protein test should be carried out for people presenting with symptoms of lower respiratory tract infection in primary care:

“Q2 And why is NICE recommending that this test should be carried out?..when people present to their GP without a diagnosis of pneumonia but with a chesty cough and a diagnosis of lower respiratory tract infection, in around about 60 per cent of the time, they will get an antibiotic prescription. The evidence is quite clear that this doesn't help most people. There's a systematic review, a Cochrane review, which shows that the symptomatic effect or relief of symptoms is really very modest. In an illness that lasts around about three weeks you probably get about half a day reduction in symptom reduction. So there's not much effect from those antibiotics.”

“The evidence shows that if you use a CRP test...it can help reduce antibiotic prescribing. It improves the confidence of the GP and the patient in the consultation that there isn't a significant infection going on. ..For those people who have a low result you can be really pretty confident that they don't have pneumonia.”

The four-minute blood test shows levels of C-reactive protein, a biomarker of bacterial infections. The findings from the Attenborough GP Surgery pilot demonstrate responsible prescribing, improved patient care, value for money by producing cost savings to GPs and wider urgent care services, a new model of delivering care that is flexible and responsive to the needs of the local community and a personalised service that reflects the needs and expectations of patients and their families:

- 70% of patients presenting with a suspected lower respiratory tract infection had low levels of C-Reactive Protein (CRP <20mg/L)
- Prescription of antibiotics was reduced by 23%
- 31% of patients were prescribed antibiotics on their initial presentation during winter 2014/2015 compared with 8% during winter 2015/2016 when the point-of-care CRP testing was implemented
- Unscheduled follow-up visits within 28 days for patients who were not prescribed antibiotics fell by more than 50%
- The reduction in re-attendance rates infers a level of patient satisfaction and represents significant cost savings to GPs and the wider urgent care services

“The test gives us the confidence we need to be able to sensibly restrict antimicrobial prescribing, while making sure those who really do have an established bacterial infection get the antibiotics they need.”

“Another great thing about carrying out these four-minute tests is that they also give the patient confidence that they are getting the treatment they need despite having no antibiotic prescription, so they are less likely to come back to the surgery for further reassurance. We saw a fall of more than 50% in unscheduled follow-up visits by these patients.”

The Attenborough Surgery was awarded £10,000 “acorn” funding in the 2015/2016 NHS Innovation Challenge Prizes, which they will use to roll out the fingerprick blood tests system to 10 additional GP practices this winter. In May 2016, the GP surgery staff led workshops at Westminster to demonstrate to MPs and peers the practical action they are taking to address antimicrobial resistance.

- NHS England. “Challenge Prize cash supporting GP surgery to fight antibiotic resistance”. NHS England, News, 26 May 2016. Web. 02 June 2016. <https://www.england.nhs.uk/2016/05/antibiotic-resistance-2/>

### 3 Cochrane evidence: leading to new research

#### (i) The Bells Study

Initial versions of two Cochrane Neuromuscular Reviews identified important treatment uncertainties, where two types of drugs were being regularly and routinely prescribed without high quality evidence of effectiveness - one (anti-viral agents) being expensive.

- Salinas RA, Alvarez G, Daly F, Ferreira J. Corticosteroids for Bell's palsy (idiopathic facial paralysis). Cochrane Database of Systematic Reviews 2010, Issue 3. Art. No.: CD001942. DOI: 10.1002/14651858.CD001942.pub4
- Gagyor I, Madhok VB, Daly F, Somasundara D, Sullivan M, Gammie F, Sullivan F. Antiviral treatment for Bell's palsy (idiopathic facial paralysis). Cochrane Database of Systematic Reviews 2015, Issue 9. Art. No.: CD001869. DOI: 10.1002/14651858.CD001869.pub7

“More data are needed from a large multicentre randomised controlled and blinded study with at least 12 months' follow up before a definitive recommendation can be made regarding the routine use of aciclovir in Bell's palsy.”

“Available evidence from randomised controlled trials does not show significant benefit from treating Bell's palsy with corticosteroids.” [This conclusion differed from two other systematic reviews at that time that had included trials with significant bias (29 % of participants lost to follow-up; and non-randomized study design)].”

The Cochrane authors advocated for more robust data from an adequately powered high quality randomized controlled trial (RCT).

“More randomised controlled trials with a greater number of patients are needed to determine reliably whether there is real benefit (or harm) from the use of steroid therapy in patients with Bell's palsy.

“A good quality randomised controlled trial is needed, which incorporates allocation concealment of the random sequence and blind assessment of patient-centred meaningful outcomes. In a condition where the natural course is spontaneous recovery in the majority of cases, the number of patients has to be big enough to give the study the power to detect clinically relevant improvements.”

As a direct result, the NIHR Health Technology Assessment programme commissioned the world's largest RCT on effectiveness and cost effectiveness of treating Bell's Palsy:

“Two recent Cochrane reviews concerning the treatment of Bell's palsy have examined the effectiveness of oral prednisolone and aciclovir. These found that insufficient data exist to conclude that either or both therapies are effective. Many of the studies included in the reviews either failed to randomise patients or, when correctly randomised, were erroneously interpreted in a favourable light.”

“Given this lack of evidence the UK National Institute for Health Research (NIHR) Health Technology Assessment programme commissioned an independent academic group to conduct a randomized clinical trial to determine whether prednisolone or aciclovir, used separately or in combination and used early in the course of Bell's palsy, improved the chances

## of recovery at 3 and 9 months.”

The Bells Study provided robust evidence to support the early use of oral prednisolone alone, as an effective treatment which may be considered cost-effective by NHS commissioners (Sullivan et al, 2009). In updating the Cochrane Review, the Cochrane authors (now also including authors from the Bells study) were able to strengthen these findings by including an additional RCT. This evidence has been included in national guidance and has led to:

- cost effective changes in prescribing practice (a single relatively inexpensive drug instead of a relatively expensive drug or a combination)
- Trends in prescribing behaviour were analysed between 2001 and 2012 (Morales et al, 2013) and show the evidence was associated with a significant increase in treatment with prednisolone (maximum 70%) and reduction (maximum 41%) in combination treatment with antivirals.
- improving quality of care (early treatment with prednisolone [steroid] significantly increases the chances of complete recovery of facial movement at three and nine months; acyclovir [anti-viral] has little or no effect);
- The use of more effective early therapy was associated with a reduction in referrals to hospital by 36% (from 9.2% to 5.9% of incident cases).
- and reduced waste in research (one large RCT commissioned instead of any more small studies inadequately powered to address the uncertainties).
- Recent blog post for the BMJ by Glasziou and Chalmers (2015) uses the initial findings of these Cochrane Reviews as an example of how a systematic review can reduce waste in research outcomes:

“Modest evidence of clinically worthwhile effects, but remaining uncertainty. This would suggest that it would be worth funding a larger, better study (but NOT funding additional small studies)—the decision taken, for example, by the English Health Technology Assessment programme to support assessments of the effects of steroids for Bell’s Palsy”

- Sullivan F, Swan I, Donnan P, Morrison J, Smith B, McKinstry B, Davenport R, Vale L, Clarkson J, Hernández R, Stewart K, Hammersley V, Hayavi S, McAteer A, Gray D, Daly F. A randomised controlled trial of the use of aciclovir and/or prednisolone for the early treatment of Bell’s palsy: the BELLS study. *Health Technol Assess* 2009;13(47):1-130. DOI: 10.3310/hta13470. Available from: <http://www.journalslibrary.nihr.ac.uk/hta/volume-13/issue-47#>
- Morales D, Donnan PT, Daly F, Staa TV, Sullivan FM (2013) Impact of clinical trial findings on Bell’s palsy management in general practice in the UK 2001-2012: interrupted time series regression analysis. *BMJ Open* 2013;16(3):e003121. Available from: <http://bmjopen.bmj.com/content/3/7/e003121.full>
- Hernández RA, Sullivan F, Donnan P, Swan I, Vale L; BELLS Trial Group. Economic evaluation of early administration of prednisolone and/or aciclovir for the treatment of Bell’s palsy. *Fam Pract* 2009;26(2):137-44. Available from: <http://fampra.oxfordjournals.org/content/26/2/137.full.pdf+html>
- Glasziou, Paul and Chalmers, Iain. “How systematic reviews can reduce waste in research”. *BMJ blogs*, 29 October 2015. Web. 06 November 2015. <http://blogs.bmj.com/bmj/2015/10/29/how-systematic-reviews-can-reduce-waste-in-research/>

## 4 Cochrane evidence: identifying promising interventions that warrant further investigation in clinical practice, research or guideline development

### (i) Preoperative inspiratory muscle training for preventing postoperative lung complications

A Cochrane Anaesthesia, Critical & Emergency Care Review, published in October 2015, evaluated the effects of inspiratory muscle training in people undergoing major surgery, compared with usual care (such as advice on deep breathing exercises), a non-exercise intervention or no intervention. The review found that physiotherapist-led training in breathing before heart or major abdominal surgery was associated with a reduced risk of lung collapse or pneumonia after surgery. There was no evidence that it reduced the numbers of people ventilated for 48 hours or more, or the risk of death after the operation. The findings were based on small studies of low quality evidence and larger, better designed trials are needed. At present, this treatment is not included in UK guidelines (NICE NG45) but is viewed by practitioners as a relatively inexpensive intervention of possible clinical benefit that might warrant further investigation, as indicated by the NIHR Dissemination Centre Signal on this review:

“This review highlights what may be a valuable use of breathing training for patients at high risk of postoperative respiratory complications. Whilst there are limitations to the studies included in the review, the authors’ comprehensive analyses demonstrate the very real possibility that the training may have a positive impact on respiratory morbidity in these vulnerable groups. Inspiratory muscle training devices are relatively inexpensive and offer physiotherapists a pre-operative intervention worthy of further investigation.”

With the launch in June 2016 of our latest initiative, ‘Evidence for Everyday Allied Health’, to make evidence accessible to allied health professionals, Cochrane UK will be encouraging the discussion and appraisal of such evidence with physiotherapists in their online communities.

- Katsura M, Kuriyama A, Takeshima T, Fukuhara S, Furukawa TA. Preoperative inspiratory muscle training for postoperative pulmonary complications in adults undergoing cardiac and major abdominal surgery. *Cochrane Database of Systematic Reviews* 2015, Issue 10. Art. No.: CD010356. DOI: 10.1002/14651858.CD010356.pub2.
- NIHR Dissemination Centre Signal. Breathing training before major surgery may reduce lung complications afterwards. NIHR Dissemination Centre, 15 January 2016. Web. 27 June 2016. <https://discover.dc.nihr.ac.uk/portal/article/4000244/breathing-training-before-major-surgery-may-reduce-lung-complications-afterwards>

## 4 Cochrane evidence: identifying promising interventions that warrant further investigation in clinical practice, research or guideline development

### (ii) Micro-invasive treatments for managing tooth decay

A Cochrane Oral Health Review, published in November 2015, evaluated the effects of new micro-invasive treatments for managing tooth decay on adjacent teeth in children and adults and found they are significantly more effective than non-invasive professional treatment, for example with fluoride varnish or advice to floss. Due to the small number of studies, it remains unclear which micro-invasive technique offers the greatest benefit, or whether the effects of micro-invasive treatment confer greater or lesser benefit according to different clinical or patient considerations. At present these treatments are not yet in UK guidelines (SIGN 138) but have potential to benefit a wide population, as indicated by the NIHR Dissemination Centre Signal on this review:

“These techniques are still at an early stage of adoption in general dentistry in the UK but this work suggests that they have potential clinical benefit.”

- Dorri M, Dunne SM, Walsh T, Schwendicke F. Micro-invasive interventions for managing proximal dental decay in primary and permanent teeth. *Cochrane Database of Systematic Reviews* 2015, Issue 11. Art. No.: CD010431. DOI: 10.1002/14651858.CD010431.pub2
- Cochrane Oral Health. Micro-invasive treatments for managing dental decay on adjacent tooth surfaces in children's and adults' teeth. *Cochrane Oral Health blog*, 11 June 2015. Web. 22 June 2016. <https://cochraneohg.wordpress.com/2015/11/06/micro-invasive-treatments-for-managing-dental-decay-on-adjacent-tooth-surfaces-in-childrens-and-adults-teeth/#more-1049>
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## 5 Cochrane evidence: indicating when further research is no longer necessary

### (i) Pulmonary rehabilitation

An updated Cochrane Airways Review, now including 65 trials with 3822 participants, has confirmed that pulmonary rehabilitation for people with chronic obstructive pulmonary disease (COPD) improves outcomes important to patients: quality of life, relieving shortness of breath and fatigue, and improving exercise capacity (including the ability to walk longer distances). These improvements were large enough to be considered clinically significant and that further research is very unlikely to change the current strong confidence in the estimate of these beneficial effects. This review, together with 17 other Cochrane Airways Reviews, has informed the NICE clinical guideline on COPD (CG101), which recommends that pulmonary rehabilitation should be made available to all who find themselves disabled by COPD. The review has also informed a wide range of other major guidelines (Australian and New Zealand guidelines, World Health Organisation Report on Disability, British Thoracic Society Guideline, American Thoracic Society and European Respiratory Society Statement, Global Initiative for COPD, and the American College of Chest Physicians and Canadian Thoracic Society Guideline).

Seeking to avoid waste in research, the Cochrane editorial team took the decision to ‘close’ the review (no longer needing to be updated), reiterating that randomized controlled trials comparing pulmonary rehabilitation and conventional care in COPD are no longer warranted.

**“Clinical research has delivered meaningful outcomes. Those who apply the intervention, those who receive it, and those who fund it can act with confidence. Research money should now be directed elsewhere.”**

The Cochrane authors point to remaining uncertainties where future research would be valid and usefully focussed.

Findings from the subgroup analyses in this review update identified a difference in treatment effect between hospital-based programmes and community-based programmes as well as no differences between basic exercise programmes and those that provided more complex interventions, suggesting the need to examine and identify the most essential components of pulmonary rehabilitation programmes for achieving the best patient outcomes. Other factors that remain uncertain include the degree of supervision, the intensity of the training and how long the treatment effect persists.

This Cochrane evidence has been used to improve the lives of those suffering this debilitating condition.

The National COPD Audit Programme presents national data relating to pulmonary rehabilitation services delivered in England and Wales and documents attainment against the British Thoracic Society COPD guideline, which was informed by this review and five other Cochrane Airways Reviews.

The clinical audit (February 2016) data demonstrate that patients are likely to achieve clinically important improvement in exercise performance and health status if they take up and complete pulmonary rehabilitation. This is the first time patient outcomes from this treatment provided in routine clinical practice have been audited and they confirm that the findings of the Cochrane review are deliverable in clinical settings. The clinical audit also highlights the need to widen access to treatment so that a greater number of patients receive these benefits.

The organizational and resources audit (November 2015) suggests that there is significant under-referral of eligible patients with COPD for pulmonary rehabilitation. This applies both to pulmonary rehabilitation offered routinely to patients with stable disease and to patients after discharge from hospital following acute exacerbations of COPD. The available evidence informed by this and another

Cochrane Airways Review suggests that successful completion of pulmonary rehabilitation in both these settings reduces subsequent healthcare use (such as days spent in hospital).

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## 6 Cochrane evidence: influencing the withdrawal of ineffective or unnecessary interventions

### (i) Replacing peripheral vascular catheters when clinically indicated rather than routinely

An updated Cochrane Vascular Review, including seven trials with 4895 participants, has been used to inform recommendations in NICE accredited guidance on whether peripheral vascular catheters should be replaced when clinically indicated or routinely every three or four days. The national evidence-based guidelines for preventing healthcare-associated infections in NHS Hospitals in England, which were published in 2014, recommend that peripheral vascular catheters should be replaced when clinically indicated, a practice that is likely to be as safe, less painful for patients and cheaper than routine replacement. Tuffaha and colleagues have calculated that if the clinically-indicated strategy were to be fully implemented in all NHS hospitals in England, the cost savings would be around £40 million over five years.

This review featured in an Evidently Cochrane blog as part of Cochrane UK's Evidence for Everyday Nursing series, which was launched in November 2015, to help nurses base their decision-making in everyday practice on the best possible evidence. The blog was followed up with a tweetchat on the @WeNurses Community to discuss the Cochrane Review, how it might influence current practice and barriers that exist against changing the routine. As a result of these discussions some nurses were able to advocate successfully for local implementation of national guidance using the Cochrane evidence to effect change in their hospital trusts.

The NIHR Dissemination Centre Signal on this Cochrane Review highlights Cochrane UK's specific use of social media as a possible method to help healthcare professionals advocate withdrawing unnecessary practices that are no longer evidence-based by promoting the safety and efficacy of interventions that are:

“Health care professional organisations may wish to promote the message that it is safe to adopt catheter change based on clinical need, for example using blogs such as Evidently Cochrane or professional TweetChats.”

“Further dissemination of the review's findings among health care professional networks may provide the reassurance needed for changing practice away from more cautious routine replacement.”

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