How to write a plain language summary of a Cochrane intervention review

Checklist

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Checklist for Plain Language Summaries

This checklist is intended for use by people reading through Plain Language Summaries that have been prepared using the template, "How to write a Plain Language Summary of a Cochrane Intervention Review" (http://www.cochrane.no/sites/cochrane.no/files/uploads/How%20to%20write%20a%20Cochrane%20PLS%2024th%20February%202016.pdf).

The instructions in this checklist and in the PLS template aim to be consistent with the "Standards for the reporting of Plain Language Summaries in new Cochrane Intervention Reviews" (PLEACS) (http://methods.cochrane.org/sites/default/files/uploads/PLEACS_0.pdf).

The recommended length of a Cochrane plain language summary is between 400 and 700 words.

PLS headings	What you should check	Guidance that has been given in the PLS template
A Title	Is the plain language summary title easy to understand for a lay audience?	If the original title of the review is difficult to understand, for instance if it includes technical terms or jargon, the PLS authors are advised to consider re-writing it in plain language.
B "What is the aim of this review?"	Is it clear that the aim of the plain language summary is to present the results of a systematic review? And is it clear what a systematic review is?	People do not always understand that the results of a plain language summary come from a systematic review rather than a single study. Some also wrongly assume that the review authors have carried out the studies themselves. The PLS authors are therefore advised to use an introductory sentence such as: *"The aim of this Cochrane Review was to find out if [….]. Cochrane researchers collected and analysed all relevant studies to answer this question and found [X#] studies."*
C "Key messages"	Is there a brief summary of the main results, with reference to	The results for *each* main outcome should be presented in the section called "*What are the main results*"(see below). In the "*Key messages*" section, the PLS authors should only have presented a brief summary of the results. This summary

		the quality / certainty of the evidence? Is this a reasonable representation of the results presented further down, under "*What are the main results?*"	should include a reference to the quality or certainty of the evidence, and any important research gaps. It should not include recommendations. NB! Summarising the main results may involve some interpretation and caution is required! PLS authors may choose to highlight only some of the outcomes described under "Main results" or may present them in groups, but should avoid leaving out "empty" but important outcomes.
D	"What was studied in the review?"	Are the population, intervention and outcomes that the review is interested in explained in a way this is likely to be clear to a lay audience?	In this section, the PLS authors should have briefly described the review topic based on the following questions: • Why is this particular topic important? • What was the population(s)/health problem(s) addressed in the review? • What was the intervention(s) addressed in the review? Give enough information for readers to judge whether the intervention is comparable to those available to them • Are there outcomes addressed in the review that need to be explained, including possible adverse effects? **Where to look for this information**: PLS authors are advised to look for information about the population, intervention and outcomes that the Review aims to cover in the Background section and the Methods section
E	"What are the main results of the review?" **"Describing the included studies"**	Is it clear how many studies were included and where these studies were from? If the studies only covered certain sub-groups of the population or types of the intervention, has this been mentioned?	In this section, the PLS authors should have briefly described the included studies. It may be enough to give information about how many studies they included and where they were set. Sometimes, they may also need to give more specific information about the intervention and comparison group and the study population. For instance, if the included studies only covered certain sub-groups of the population or certain types of the intervention, this should be mentioned. The PLS authors may also need to mention the funding sources of the included studies. For instance:

		Have funding sources been described?	*"The review authors found [x#] relevant studies. [X#] were from [*country/setting*] and [x#] were from [*country/setting*]. These studies compared [*intervention*] with [*comparison*] for [*population*]. [x#] of the studies were funded by the manufacturer while [x#] were funded by government agencies."* **Where to look for this information**: PLS authors are advised to look for information about the populations, interventions and outcomes that the included studies covered in the Review's Results section (under "Included Studies") and in the Characteristics of Included Studies Table. They may find information about how the studies were funded under "Sources of Support.
E	"What are the main results of the review?" **"Reporting the effect of the interventions"**	Are the outcomes presented here the same as the outcomes presented in the SoF table? Has the quality or certainty of the evidence been presented alongside each outcome? Where the quality/certainty of the evidence is less than high, have the PLS authors indicated that there is some degree of uncertainty? If the PLS authors have used the standard sentences suggested in Appendix 1, have they used these sentences consistently? If the PLS authors have reported the effects of the intervention using numbers, have they used absolute numbers (e.g. "5 out of	When presenting the main results of the review, the PLS authors should have followed these principles: 1. Only present results for the most important outcomes, and try to present no more than seven outcomes. These outcomes should be the same as the outcomes that are presented in the Summary of Findings table 2. If you found no data on an important outcome, you must present the outcome anyway, but explain that no data were found 3. Present the quality or certainty of the evidence for each outcome, as presented in the Summary of Findings table. (Within GRADE, the phrase "quality of the evidence" is increasingly referred to as "certainty of" the evidence. Use the same term that has been used elsewhere in the review) 4. Present the results consistently, using similar words and expressions for similar levels of effect 5. If your assessment of the quality / certainty of the evidence is anything other than high, then you should avoid strong statements such as "[intervention] leads to ["outcome"]. You should rather indicate to the reader that there is some degree of uncertainty by adding modifying terms such as "probably", "may" (see Appendix 1 for suggestions). We acknowledge that the modifying terms we have suggested in Appendix 1 (such as "probably" and "may") have different meanings to different people and may be difficult to translate into other languages. Nonetheless,

		100 participants" as opposed to percent, odds rations, relative risk etc)? Have the PLS authors avoided making recommendations?	the principle of including modifying terms when there is some degree of uncertainty should be adhered to 6. Ensure that the results are reported consistently between the plain language summary and the main text of the review, including the abstract, summary of findings table, results, and summary of main results 7. Do not present recommendations (*The PLS template also offers PLS authors advice about when to present confidence intervals, and about the use of numbers in PLS)*
F	"How up-to-date is this review?"	Is it clear when the review authors searched for the included studies?	In this section, the PLS authors should have stated *when* the review authors searched for the included studies, for instance by saying: *"The review authors searched for studies that had been published up to [*date*]."* **Where to look for this information**: PLS authors are advised to look for information about the dates of the search in the Methods section, under "Search methods for identification of studies"

Appendix 1: Table of standardised statements about effect

This table shows which qualitative statements you can use for different combinations of the magnitude of effect (or effect size) and the certainty of evidence. To use the table:

1. Select an outcome that you are planning to report
2. Determine the quality/certainty of the evidence for that outcome (assessed using GRADE)
3. Decide whether the size of the effect is important, less important, or not important. This decision is a judgement call and should focus on the importance to the end user (decision makers, health care providers, health service users etc.) rather than "statistical significance"
4. Go to the relevant cell in the table below and select the appropriate standard sentence to use

Please note: You may need to amend the statements to fit your intervention and / or outcome. However, any amendments that you make to the statements should not change the underlying principles of using a standard approach to describing the magnitude and certainty of the evidence.

	Important benefit/harm	**Less important benefit/harm**	**No important benefit/harm**
High-certainty[1] evidence	[*Intervention*] improves/reduces [*outcome*] (high-certainty evidence)	[*Intervention*] slightly improves/reduces [*outcome*] (high-certainty evidence)	[*Intervention*] makes little or no difference to [*outcome*] (high certainty evidence)
Moderate-certainty[1] evidence	[*Intervention*] probably improves/reduces [*outcome*] (moderate-certainty evidence)	[*Intervention*] probably slightly improves/reduces /probably leads to slightly better/worse/less/more [*outcome*] (moderate certainty evidence)	[*Intervention*] probably makes little or no difference to [*outcome*] (moderate-certainty evidence)
Low-certainty[1] evidence	[*Intervention*] may improve/reduce [*outcome*] (low-certainty evidence)	[*Intervention*] may slightly improve/reduce [*outcome*] (low-certainty evidence)	[*Intervention*] may make little or no difference to [*outcome*] (low-certainty evidence)
The point estimate indicates an important benefit or harm, and the confidence interval also includes an important benefit / harm / no effect*	[*Intervention*] may lead to [*better outcome*]. However, the range where the actual effect may be (the "margin of error") indicates that [*intervention*] may make little or no difference / might worsen / increase [*outcome*]. Or [*Intervention*] may lead to [*better / worse outcome / little or no difference*]. However, the effects of [*intervention*] vary and it is possible that [*intervention*] makes little or no difference / worsens / increases [*outcome*].		
Very low-certainty[1] evidence	We are uncertain whether [*intervention*] improves/reduces [*outcome*] as the certainty of the evidence is very low		
No data or no studies	None of the studies looked at [*outcome*]		

[1]Within GRADE, the phrase "quality of the evidence" is increasingly referred to as "certainty of" the evidence.

Appendix 2: Plain Language Summary examples

Example 1: This example has been written with the help of the plain language summary template and is based on the following review: Opiyo N, English M. In-service training for health professionals to improve care of the seriously ill newborn or child in low and middle-income countries (Review). Cochrane Database of Systematic Reviews 2015 (In press).

A

B

C

D

E

In-service training for health professionals to improve care of seriously ill newborns and children in low-income countries

What is the aim of this review?

The aim of this Cochrane review was to find out whether additional emergency care training programmes can improve the ability of health workers in poor countries to care for seriously ill newborns and children admitted to hospitals. Researchers in the Cochrane Collaboration collected and analysed all relevant studies to answer this question and found two relevant studies.

Key messages

Giving health professionals in poor countries additional training in emergency care probably improves their ability to care for seriously ill newborns. But we still need more high quality studies, including studies where health professionals are trained to care for seriously ill older children.

What was studied in the review?

In poor countries, many babies and children with serious illnesses die even though they have been cared for in hospitals. One reason for this may be that health workers in these countries are often not properly trained to offer the care that these children need.

In poor countries, children may often become seriously ill because of conditions such as pneumonia, meningitis and diarrhoea, and may need emergency care. For newborn babies, the most common reason for emergency care is when the baby gets too little oxygen while being born. If this goes on for too long, the person delivering the baby has to help the baby breathe, and sometimes has to get the baby's heart rate back to normal. This is called neonatal resuscitation.

Neonatal resuscitation is a skilled task and the health worker needs proper training. As babies need to be resuscitated quickly, the health worker also needs to know how to prepare for this before the baby is born. For instance, he or she needs to know how to prepare the room and the proper equipment. Health workers in poor countries often do not have these skills, and these babies are likely to die. Babies can also be harmed if the health worker does not resuscitate the baby correctly.

There are a number of training programmes that teach health workers how to give emergency care to seriously ill babies and children. But these have mostly been developed and tested in wealthy countries and we don't know if these would work in poor countries.

What are the main results of the review?

They review authors found two relevant studies. These studies compared the practices of health professionals who had been given extra training in the care of newborns with the practices of health professionals who did not get extra training.

In the first study, nurses at a maternity hospital in Kenya got a one-day training course in how to resuscitate newborn babies. This course was adapted from the UK Resuscitation Council, and included lectures and practical training. The study suggests that after these training courses:

- Health professionals are probably more likely to resuscitate newborn babies correctly (moderate certainty evidence)
- Newborn babies may be less likely to die while being resuscitated (low certainty evidence)

In the second study, doctors, nurses and midwives in five Sri Lankan hospitals were given a four-day training course in how to prepare for and provide care for newborns. This course was adapted from the WHO Training Modules on Essential Newborn Care and Breastfeeding, and included lectures, demonstrations, hands-on training and small group discussions. This study suggests that after these training courses:

- Health professionals are probably more likely to be well-prepared to resuscitate newborn babies (moderate certainty evidence)

Unfortunately, the two studies only followed up the health professionals for two to three months after they have received training. We therefore don't know if the benefits of the training courses lasted over time.

The review authors did not find any studies that looked at the effect of training programmes for the care of older children.

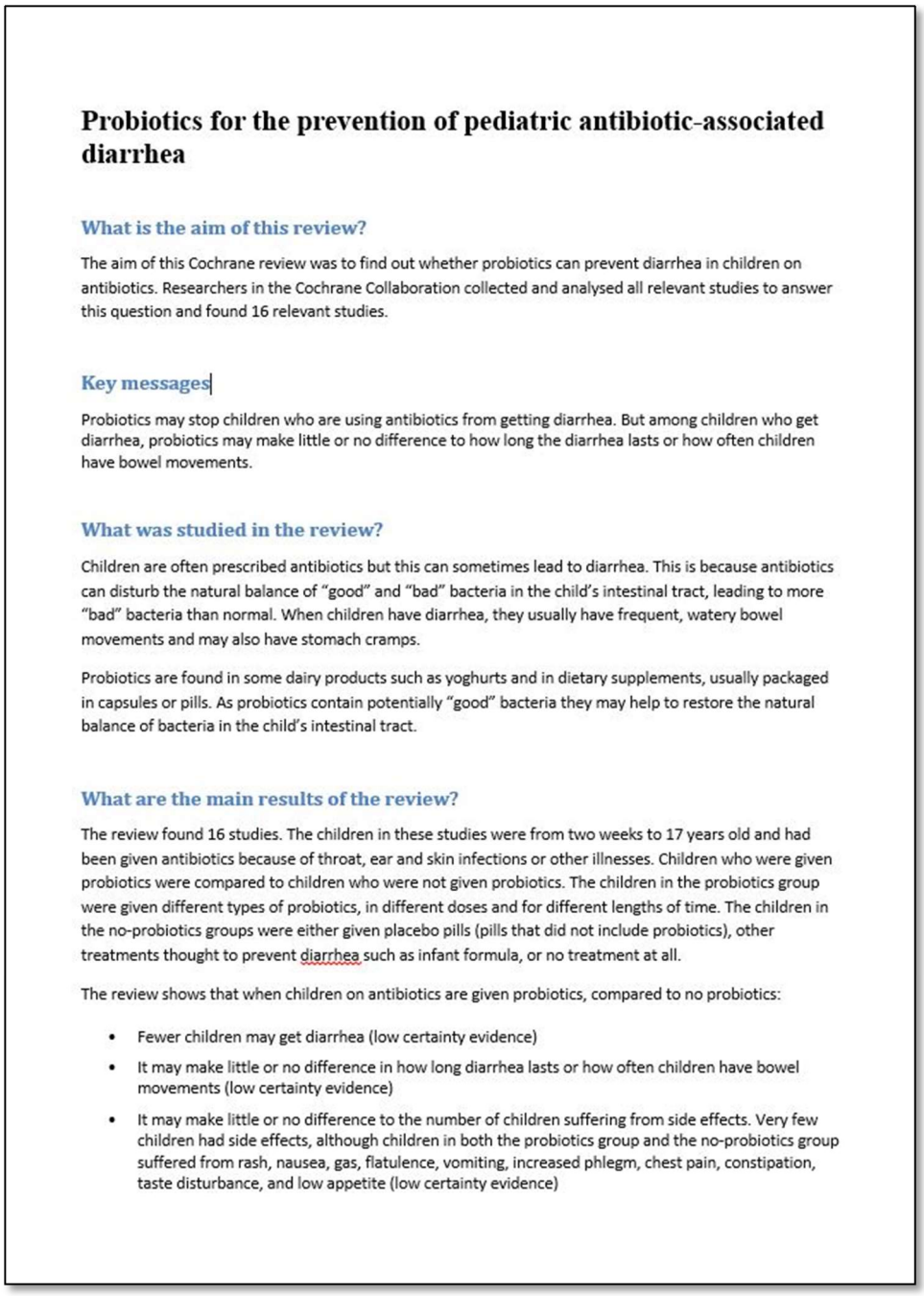
F

How up-to-date is this review?

The review authors searched for studies that had been published up to February 2015.

Example 2: This example has been written with the help of the plain language summary template and is based on the following review: Johnston BC, Goldenberg JZ, Vandvik PO, Sun X, Guyatt GH. Probiotics for the prevention of pediatric antibiotic-associated diarrhea. Cochrane Database of Systematic Reviews 2011, Issue 11. Art. No.: CD004827. DOI: 10.1002/14651858.CD004827.pub3.

This Plain Language Summary also includes a simplified Summary of Findings Table.



Probiotics for the prevention of pediatric antibiotic-associated diarrhea

What is the aim of this review?

The aim of this Cochrane review was to find out whether probiotics can prevent diarrhea in children on antibiotics. Researchers in the Cochrane Collaboration collected and analysed all relevant studies to answer this question and found 16 relevant studies.

Key messages

Probiotics may stop children who are using antibiotics from getting diarrhea. But among children who get diarrhea, probiotics may make little or no difference to how long the diarrhea lasts or how often children have bowel movements.

What was studied in the review?

Children are often prescribed antibiotics but this can sometimes lead to diarrhea. This is because antibiotics can disturb the natural balance of "good" and "bad" bacteria in the child's intestinal tract, leading to more "bad" bacteria than normal. When children have diarrhea, they usually have frequent, watery bowel movements and may also have stomach cramps.

Probiotics are found in some dairy products such as yoghurts and in dietary supplements, usually packaged in capsules or pills. As probiotics contain potentially "good" bacteria they may help to restore the natural balance of bacteria in the child's intestinal tract.

What are the main results of the review?

The review found 16 studies. The children in these studies were from two weeks to 17 years old and had been given antibiotics because of throat, ear and skin infections or other illnesses. Children who were given probiotics were compared to children who were not given probiotics. The children in the probiotics group were given different types of probiotics, in different doses and for different lengths of time. The children in the no-probiotics groups were either given placebo pills (pills that did not include probiotics), other treatments thought to prevent diarrhea such as infant formula, or no treatment at all.

The review shows that when children on antibiotics are given probiotics, compared to no probiotics:

- Fewer children may get diarrhea (low certainty evidence)
- It may make little or no difference in how long diarrhea lasts or how often children have bowel movements (low certainty evidence)
- It may make little or no difference to the number of children suffering from side effects. Very few children had side effects, although children in both the probiotics group and the no-probiotics group suffered from rash, nausea, gas, flatulence, vomiting, increased phlegm, chest pain, constipation, taste disturbance, and low appetite (low certainty evidence)

How up-to-date is this review?

The review authors searched for studies that had been published up to May 2010.

Summary of findings table

What happens?	No probiotics	Probiotics	Certainty of the evidence
Diarrhea Fewer children may get diarrhea when given probiotics	223 children per 1000	89 children per 1000 (65 to 122 children)*	⊕⊕⊖⊖ Low
Side effects Probiotics may make little or no difference in side effects	18 children per 1000	23 children per 1000 (8 to 38 children)*	⊕⊕⊖⊖ Low
Duration of diarrhea Probiotics may make little or no difference to the length of time the child has diarrhea	The children who were given probiotics had diarrhea for 0.6 fewer days (1.18 to 0.02 fewer)* than the children who were not given probiotics		⊕⊕⊖⊖ Low
Bowel movements Probiotics may make little or no difference to how often children have bowel movements	The children who were given probiotics had bowel movements 0.3 fewer times (0.6 lower to 0 higher)* than the children who were not given probiotics		⊕⊕⊖⊖ Low

*The numbers in brackets show the range where the actual effect may be.