

Cochrane systematic reviews as a source of information for practice and trials

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Background

- Systematic reviews are a key component of the evidence base for making choices about health care.
- Systematic reviews should be used to provide the ethical, scientific and environmental justification for new trials.
- The Cochrane Collaboration is the world's largest single source of systematic reviews of the effects of healthcare interventions.
- How useful are Cochrane Reviews as a source of knowledge for healthcare practice and research?

Cochrane Reviews

- Have a standard structure which includes the authors' conclusions on the implications for practice and the implications for research of their findings.
- More than 4600 full reviews have been published by October 2011 in the *Cochrane Database of Systematic Reviews (CDSR)*.
- *CDSR* became a monthly publication from February 2010 (issue 2).
- Each issue includes full Cochrane Reviews appearing for the first time and updated versions of earlier reviews.

Methods

- At least two Clarkes independently examined the implications for practice in the authors' conclusions of all new and updated reviews in the first 12 monthly issues of *CDSR* (February 2010 to January 2011).
- We coded each review to indicate whether its authors concluded that an intervention had been shown to be effective, should not be used in practice (or could not be recommended), should only be used in research, or was not supported or refuted by the evidence.
- Each review was also classified into areas of health or health care, and coded to indicate the responsible Cochrane Review Group.
- Final decisions on coding were taken by one Clarke.

Results - overall

The 12 monthly issues of *CDSR* contained 390 new and 462 updated reviews, many of which provide evidence on more than one intervention.

An intervention ...	New reviews (390)	Updated reviews (462)	Total (852)
works			
doesn't work (or 'cannot be recommended')			
should only be used in research			
is uncertain			

Results - overall

The 12 monthly issues of *CDSR* contained 390 new and 462 updated reviews, many of which provide evidence on more than one intervention.

An intervention ...	New reviews (390)	Updated reviews (462)	Total (852)
works	197 (50.5)	216 (46.8)	413 (48.5)
doesn't work (or 'cannot be recommended')	55 (14.1)	84 (18.2)	139 (16.3)
should only be used in research	8 (2.1)	17 (3.7)	25 (2.9)
is uncertain	233 (59.7)	261 (56.5)	494 (58.0)

Results – by intervention

The 390 new reviews were analysed by the type of intervention studied.

An intervention ...	Drug (213)	Not drug (177)	Total (390)
works			197 (<i>50.5</i>)
doesn't work (or 'cannot be recommended')			55 (<i>14.1</i>)
should only be used in research			8 (<i>2.1</i>)
is uncertain			233 (<i>59.7</i>)

Results – by intervention

The 390 new reviews were analysed by the type of intervention studied.

An intervention ...	Drug (213)	Not drug (177)	Total (390)
works	115 (<i>54.0</i>)	82 (<i>46.3</i>)	197 (<i>50.5</i>)
doesn't work (or 'cannot be recommended')	38 (<i>17.8</i>)	17 (<i>9.6</i>)	55 (<i>14.1</i>)
should only be used in research	5 (<i>2.3</i>)	3 (<i>1.7</i>)	8 (<i>2.1</i>)
is uncertain	122 (<i>57.3</i>)	111 (<i>62.7</i>)	233 (<i>59.7</i>)

Results – by funder

The 390 new reviews were analysed by the source of funding for the editorial base of the relevant Cochrane Review Group.

An intervention ...	NIHR (202)	Other UK (28)	Non UK (160)
works			
doesn't work (or 'cannot be recommended')			
should only be used in research			
is uncertain			

Results – by funder

The 390 new reviews were analysed by the source of funding for the editorial base of the relevant Cochrane Review Group.

An intervention ...	NIHR (202)	Other UK (28)	Non UK (160)
works	104 (<i>51.5</i>)	10 (<i>35.7</i>)	83 (<i>51.9</i>)
doesn't work (or 'cannot be recommended')	29 (<i>14.4</i>)	4 (<i>14.3</i>)	22 (<i>13.8</i>)
should only be used in research	2 (<i>1.0</i>)	1 (<i>3.6</i>)	5 (<i>3.1</i>)
is uncertain	121 (<i>59.9</i>)	20 (<i>71.4</i>)	92 (<i>57.5</i>)

Conclusions

- Cochrane Reviews identify many interventions for which research shows that benefits outweigh harms.
- Cochrane Reviews identify several interventions for which research shows that harms outweigh benefits, including some that should be restricted to research.
- Cochrane Reviews identify many interventions for which research included in the review is insufficient to assess benefits and harms.
- Cochrane Reviews identify many examples of uncertainties in health care which should be resolved through randomised trials.
- How well used are Cochrane Reviews as a source of knowledge for healthcare practice and research?