


# Review: personalised risk communication may improve uptake of screening tests more than general risk communication


Edwards A, Unigwe S, Elwyn G, *et al.* Personalised risk communication for informed decision making about entering screening programs. *Cochrane Database Syst Rev* 2003;(1):CD001865 (latest version 18 Nov 2002).

## Q Do personalised risk communication (PRC) strategies about participation in health screening programmes increase screening uptake compared with general risk communication (GRC) strategies?


### METHODS



**Data sources:** Cochrane Consumers and Communication Review Group specialised register (March 2001), Medline (1985–2001), EMBASE/Excerpta Medica (1985–2001), CancerLit (1985–2001), CINAHL (1985–2001), ClinPSYC (1989–2001), and Science Citation Index Expanded (March 2002); and hand searches of bibliographies of key publications, journals, and authors.



**Study selection and assessment:** randomised controlled trials (RCTs) that included participants facing real life decisions about whether to be screened (an investigation done by a health professional); compared PRC with GRC; and assessed cognitive, affective, behavioural, health status, or economic outcomes. Exclusion criteria: studies of mass communication or military, school, or prison interventions. Quality of individual studies was assessed using the Jadad scale and a second method score.



**Outcome:** uptake of screening test.

### MAIN RESULTS

13 trials met the selection criteria. Studies addressed screening for breast cancer (10 trials), cervical cancer (1 trial), prostate cancer (1 trial), colorectal cancer (1 trial), and high cholesterol (2 trials). Overall quality of individual studies was good (mean score 15 out of 22). Types of PRC were a numerical risk or risk score; risk categorised as, for example, low, medium, or high; or a listing of personal risk factors without an estimate of risk level.

Meta-analysis was done using a random effects model. Overall, PRC (written, spoken, or visually presented) increased uptake of screening tests compared with GRC (table). However, meta-analysis of 3 trials of PRC using numerical risk scores (n = 4381) and 2 trials of PRC using risk categorisation (n = 1031) found no difference

between PRC and GRC for test uptake; PRC using personal risk factor lists improved test uptake more than GRC (table). Separate analyses by type of screening for mammography, Pap smears, prostate cancer screening, and colorectal screening showed no difference between PRC and GRC. Analyses for cholesterol screening showed increased uptake with PRC, but this result should be viewed with caution because of heterogeneity among studies.

### CONCLUSIONS

Personalised risk communication may increase uptake of health related screening more than general risk communication.

### Commentary

The systematic review by Edwards *et al* provides insight into how different methods of communicating risks and benefits to individuals affect whether or not they subsequently uptake screening. This is in contrast to previous reviews that have focused on how more general interventions affect screening uptake.<sup>1</sup>

The authors used a comprehensive search strategy, clear inclusion criteria, and 2 checklists to assess methodological quality of individual studies. The results are interesting, in that increased screening uptake with PRC appears to be dependent on how PRC is presented. Communication of risk in precise numerical terms or in categories (low, medium, and high risk) resulted in lower uptake than communication of risk in more general terms. When individuals were given a list of their risk factors as the basis of discussion, but not precise values, they were more likely to uptake screening. However, a cautionary note must be added about the interpretation of these findings because of the small number of studies and the limited variety of screening programmes that were included. Only 5 of the 10 studies included in the analysis used this type of intervention, and most examined breast cancer screening.

Practitioners who counsel patients about the risks and benefits of screening may find these results useful. They should be aware of the potential effects of presenting PRC in different ways and the subsequent effect this may have on screening uptake. In light of the findings of this review, further research is needed on the presentation of risk information and its effects on individual behaviour. In particular, examining whether particular types of PRC are more or less beneficial for different screening decisions may be appropriate.

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1 Forbes C, Jepson R, Martin-Hirsch P. Interventions targeted at women to encourage the uptake of cervical screening. *Cochrane Database Syst Rev* 2002;(3):CD002834.

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Personalised risk communication (PRC) v general risk communication (GRC) for improving uptake of screening tests\*

Type of PRC	Weighted event rates		RBI (95% CI)	NNT (CI)
	PRC	GRC		
All (10 trials, n = 7465)	32%	27%	26% (7 to 48)	20 (12 to 100)
Personal risk factor list (5 trials, n = 2053)	49%	38%	32% (8 to 61)	10 (6 to 25)

\*Abbreviations defined in glossary; PRC event rate, RBI, NNT, and CI calculated from data in article.