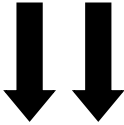


Recommendations

1. Verbal presentation

	<p>Recommendation</p> <p>“The verbal presentation of risks, benefits and harm must not be applied exclusively.”</p> <p>Agreed: 14, Disagreed: 0, Abstentions: 1</p> <p>Quality of the evidence: moderate quality</p>
<p>Comment on the recommendation:</p> <p>The recommendation refers to the comparison of exclusively verbal with numerical presentation.</p> <p>The studies show that the verbal presentation of risks, benefits and harm is inferior to the numerical presentation. In five out of six studies the numerical presentation enables a more realistic risk estimation / better understanding and in three out of four studies better knowledge. Regarding the outcome <i>understanding</i> there is no difference. All six studies show a higher <i>intention of performing the measure</i> concerned.</p> <p>The efficacy of the affective outcomes (11 studies) is inconsistent.</p>	

Summary of the findings

Characteristics of the included studies

For this comparison, 15 studies with a total of 3,531 participants were included. The samples sizes were between 116 and 480, the ages ranged between 16 and 82 years. The studies were carried out in the USA (17-21), Great Britain (18, 22-28), Canada (29), Australia (30) and Singapore (31). The participants included pregnant women and mothers (27, 28), students of both sexes (21, 24), patients of both sexes (20, 25, 29-31), citizens of both sexes (17, 18, 22, 23, 26) and carers of both sexes (19).

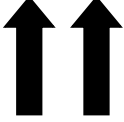
The interventions consisted of scenarios concerning the side effects of antibiotics (23, 24), pain killers (18, 22, 31), statins (25), Tamoxifen (26) and cancer therapies

(17, 18, 20, 30), of scenarios relating to medical test results (27), the probabilities of certain incidents concerning babies (28), stroke risk (29) and to a fictitious discussion between a physician and relatives (19).

Results for the relevant outcomes

With regard to the outcomes *understanding*, *risk perception* and *knowledge*, positive effects were shown for the numerical presentation (18, 22-27, 29). No difference was found for the outcome *comprehensibility* (30). The results for the outcomes *acceptance*, *attractiveness* and *credibility* were not clear, but a positive tendency towards numerical presentation could be seen (17, 18, 20-25, 28, 30, 31). The *intention to perform a certain measure* is higher in numerical presentation (18, 22-26).

2. Absolute risk formats

	<p>Recommendation</p> <p>“Benefits and harm must be presented in absolute risk formats.”</p> <p>Agreed: 15, Disagreed: 0, Abstentions: 0</p> <p>Quality of the evidence: moderate quality</p>
<p>Comment on the recommendation:</p> <p>The recommendation refers to the comparison of the presentation as ARR with the exclusive presentation of RRR in health information.</p> <p>Regarding the cognitive outcome <i>understanding / risk perception</i>, two out of three studies showed that, if details concerning the basic risk are missing, ARR enables more precise estimates to be made. In addition, ARR is usually superior to RRR, if the basic risks are given. However, RRR leads to an overestimation of the effects. No effects were shown in two studies with regard to the cognitive outcomes <i>knowledge and comprehensibility</i>.</p> <p>The effects on affective outcomes (two studies) were inconsistent.</p>	

Summary of the findings


Characteristics of the included studies

For this comparison, five studies with a total of 4,314 participants were included. The sample sizes were between 209 and 2,978 participants and the age ranged between 18 and 74 years, depending on the target group. The studies had been carried out in Great Britain (32), the USA (33-36), Canada (33), Germany (33) and Norway (33). The participants included people from the general public (30, 34), women (34), patients (35) and people working in reservations and members of the First Nations (36). The interventions consisted of scenarios concerning influenza vaccinations (32), fictitious diseases (35, 36), the taking of statins for high cholesterol (33) and risk information for mammography screening (34).

Results for the relevant outcomes

With regard to the outcomes *understanding / risk perception* an effect was shown for ARR (32, 34). No differences could be seen for the outcomes *knowledge* and *comprehensibility / readability* (33, 36). For the outcomes *acceptance / attractiveness* the findings were inconsistent (32, 33).

3. Natural frequencies

	<p>Recommendation</p> <p>“For probabilities >1%, presentation in percentages may be applied instead of presentation in natural frequencies”</p> <p>Agreed: 14, Disagreed: 0, Abstentions: 0</p> <p>Quality of the evidence: high quality</p>
<p>Comment on the recommendation:</p> <p>The recommendation refers to the comparison of the presentation in percentages to that in natural frequencies in health information.</p> <p>Regarding the outcome <i>understanding / risk perception</i> one study showed that for probabilities >1% the presentation in percentages was superior to that in natural frequencies.</p> <p>No difference was shown for all other outcomes (<i>knowledge</i> – 2 studies; <i>comprehensibility / readability</i> – 2 studies; <i>acceptance / attractiveness</i> – 1 study).</p>	

Summary of the findings

Characteristics of the included studies


For this comparison, three studies with a total of 3,365 participants were included. The sample sizes were between 136 and 2,944, whereby the medium age was 39 to 61 years, depending on the target group. The studies were carried out in the USA (9, 18, 27) and England (19). Included were people from the general public (9), veterans (37) and visitors of both sexes to a web site (18).

The interventions consisted of scenarios concerning cholesterol reduction drugs and indigestion in drug facts boxes (9), cardiovascular risk (37), chemotherapy (18) and pain therapy (18).

Results for the relevant outcomes

With regard to the outcome *understanding / risk perception*, an effect for presentation in percentages was found in a high quality study (9). No differences could be seen for the outcomes *knowledge*, *comprehensibility / readability*, and *acceptance / attractiveness* (9, 18, 37).

4. Number Needed to Treat (NNS, NNH)

	<p>Recommendation</p> <p>“The presentation as number needed to treat (NNT), number needed to screen (NNS), number needed to harm (NNH) should not be used.”</p> <p>Agreed: 11, Disagreed: 0, Abstentions: 2</p> <p>Quality of the evidence: moderate quality</p>
<p>Comment on the recommendation:</p> <p>The recommendation refers to the comparison of the presentation as NNT (NNS, NNH) to the presentation as absolute risk reduction (ARR).</p> <p>Studies concerning the outcome <i>understanding / risk perception</i> show that the presentation as NNT (NNS, NNH) is inferior to presentation as ARR. Particularly when no basic risks were given, the NNT led in two studies to the overestimation of the effect.</p> <p>For all other outcomes (<i>comprehensibility / readability</i> – 1 study; <i>acceptance / attractiveness</i> – 2 studies) no differences could be seen.</p>	

Summary of the findings


Characteristics of the included studies

For this comparison, three studies with a total of 3,653 participants were included. The sample sizes were between 268 and 2,978, the ages ranged between 18 and over 60 years of age. The studies were carried out in the USA (33, 35), England (38), Canada (38), Germany (38) and Norway (38). The included participants were women passers-by in a town center (38), patients of both sexes (35) and people from the general public (33). The interventions consisted of scenarios concerning the anti-baby pill (38), fictitious diseases (35) and taking statins for high cholesterol (33).

Results for the relevant outcomes

For the outcome *understanding / risk perception* an effect for the presentation of ARR was shown (35, 38). No differences were shown for the outcomes *comprehensibility / readability* and *acceptance / attractiveness* (33, 38).

5. Reference parameters

	<p>Recommendation</p> <p>“In health information leaflets equivalent reference parameters should be used.”</p> <p>Agreed: 9, Disagreed: 0, Abstentions: 0</p> <p>Quality of the evidence: high quality</p>
<p>Comment on the recommendation:</p> <p>The recommendation refers to the comparison of presentations with the same reference parameters to those with differing parameters.</p> <p>In one study, the presentation with the same reference parameters in drug facts boxes showed a positive effect on the outcome <i>understanding / risk perception</i>. In the same study no difference was shown for the outcome <i>comprehensibility / readability</i>. No findings are recorded for all the other outcomes.</p> <p>Benefits and harm should as far as possible be presented with the same reference parameter. If there are deviations from this recommendation, these must be well-founded and the change must be portrayed transparently.</p>	

Summary of the findings

Characteristics of the included studies

For this comparison a single study was included with a total of 1,181 participants (9). The medium age was 47 years. The study was performed in the USA and included people from the general public. The interventions consisted of scenarios concerning cholesterol-reducing drugs and indigestion, each of which was presented in a drug facts box (9).

Results for the relevant outcomes

For the outcome *understanding*, a positive effect was shown for the presentation with the same parameters throughout (9). No difference was shown for the outcome *comprehensibility / readability* (9).