### The effect of alternative graphical displays to present benefits of antibiotics for sore throat on helping people to make treatment choices consistent with their own values

Cheryl Carling: Ph.d. fellow

Andy Oxman: tutor and project leader

Atle Fretheim: researcher

Gro Alice Hamre: computer scientist

Phillip Devereaux: researcher

Doris Tove Kristoffersen: statistician

Signe Flottorp: researcher

Sandra Haga: computer scientist

Holger Schuneman

Elie Akl: researcher

Norwegian Health Services Research Centre Cheryl Carling, February 2005

The effect of alternative graphical displays to present benefits [risks] of antibiotics for sore throat on helping people to make treatment choices consistent with their own values

# Which one would YOU choose?

*Treatment A:* A 33% reduced risk of heart disease during the next 10 years.

• Treatment **B**:

A 2% absolute reduction in the risk of getting heart disease during the next 10 years.

• Treatment **C**:

Among 50 people who take the pills for the next 10 years, there will be one additional person who will not get heart disease during that time.

- McGettigan P, Sly K, O'Connell D, Hill S, Henry D. The effects of information framing on the practices of physicians. J Gen Intern Med. 1999; 14:633-42.
- Herrin J, Schünemann H, Oxman AD, Vist G, Olsen K. Presentation of empirical evidence about health (Cochrane Review). In: The Cochrane Library. Oxford: Update Software. Under revision.
- Moxey A, Dip G, O'Connell D, McGettigan P. Describing treatment effects to patients: How they are expressed makes a difference. J Gen Intern Med 2003;18:948-959.

#### Main goal:

# $\sqrt{10}$ presentations of information to help people to make choices most consistent with their own values.

#### Studies

- Pilot and first study: Compared different summary statistics of the effects of cholesterol lowering drug (completed)
- Compared graphic presentations of the effect of penicillin for the treatment of sore throat (completed)
- Compares negative and positive framing of the effect of treatment for high blood pressure (data analysis in progress)
- Compares numbers and verbal presentation of the effect of treatment for moderate depression with SSRIs (in progress)

All studies conducted on the Internet

# ForskningsPuls Ditt bidrag til helseforskning

Et samarbeid mellom NRK og Nasjonalt kunnskapssenter for helsetjenesten

Sår hals - hva gjør du med det?

Tenk deg at du har sår hals. Det er vanskelig å svelge, du har problemer med å spise, det er ubehagelig hele tiden og du har feber.

Dine kommentarer

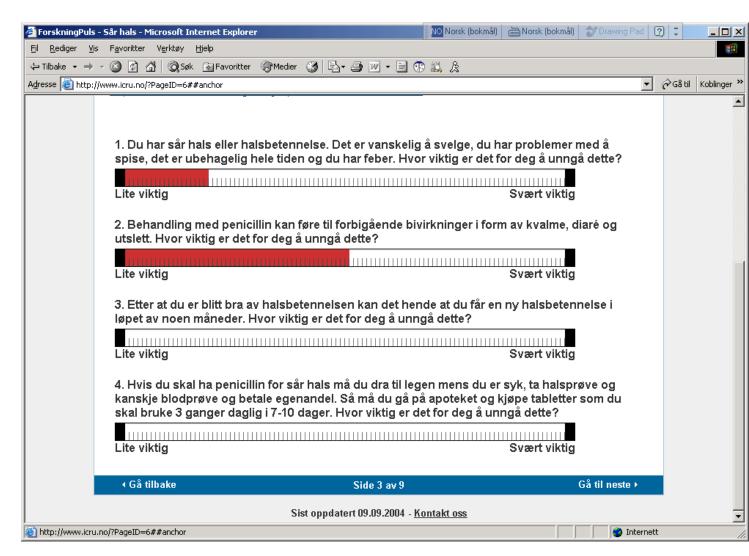
Hva vil du gjøre? Vil du oppsøke legen for å få <u>penicillin</u>, eller vil du vente og se om det går over av seg selv? Dette avhenger av hvilken informasjon du får og hva du selv foretrekker. I denne undersøkelsen skal vi fortelle deg om fordeler og ulemper forbundet med å ta penicillin og etterpå spørre deg hva du ville bestemme deg for.

Side 1 av 9

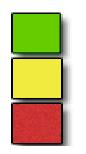
Avslutt

#### SORE THROAT STUDY

Utility measures a person's preferences or values towards a state, for example a health state.



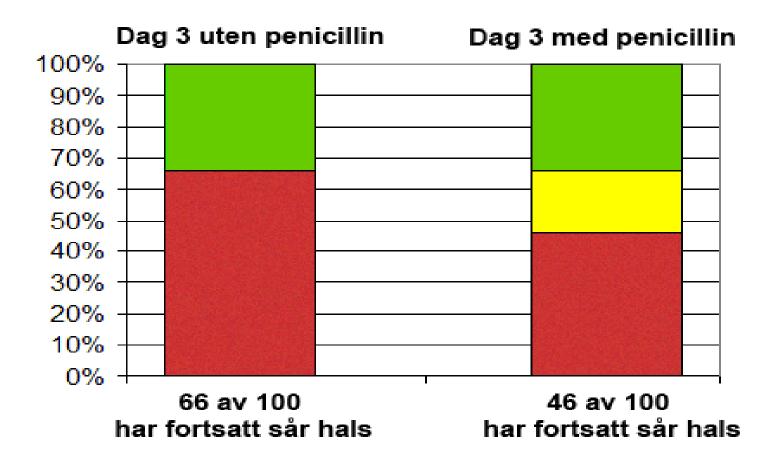
#### Av 100 pasienter med sår hals:



Bedre

Bedre på grunn av penicillin

Ikke bedre



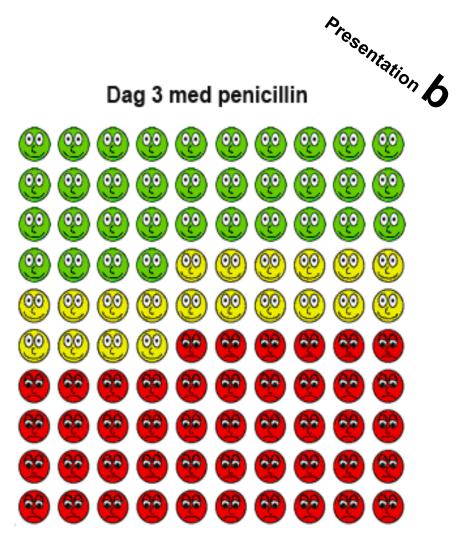
Presentation **2** 

Av 100 pasienter med sår hals:

Dag 3 uten penicillin

66 av 100 har fortsatt sår hals





#### 46 av 100 har fortsatt sår hals





Bedre

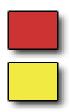
Ikke bedre



Bedre på grunn av penicillin

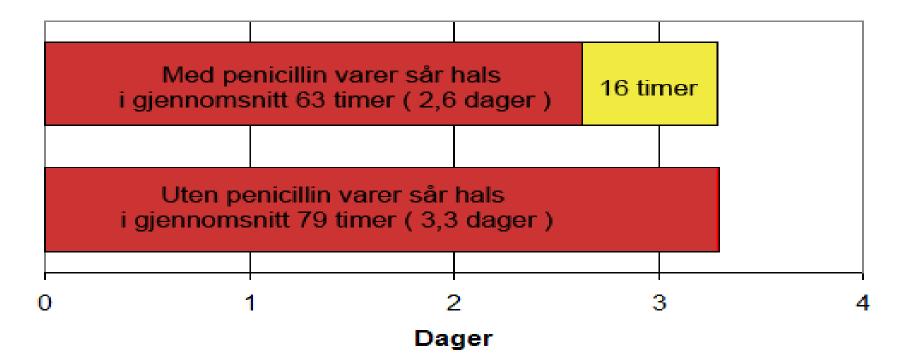


#### Sår hals varer gjennomsnittlig 16 timer mindre med penicillin

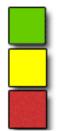


Gjennomsnittlig varighet av sår hals.

Gjennomsnittlig reduksjon i varighet av sår hals.

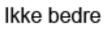


#### Av 100 pasienter med sår hals:



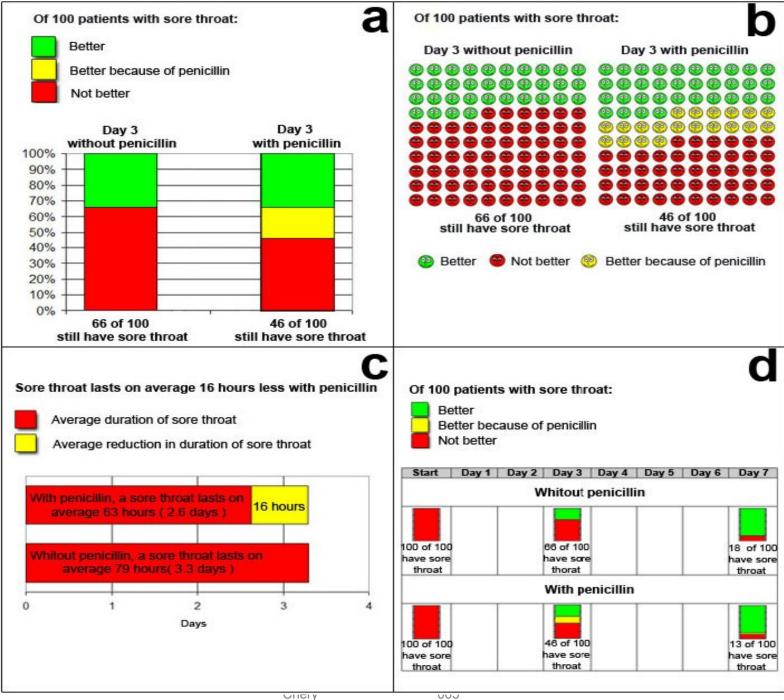
Bedre

Bedre på grunn av penicillin

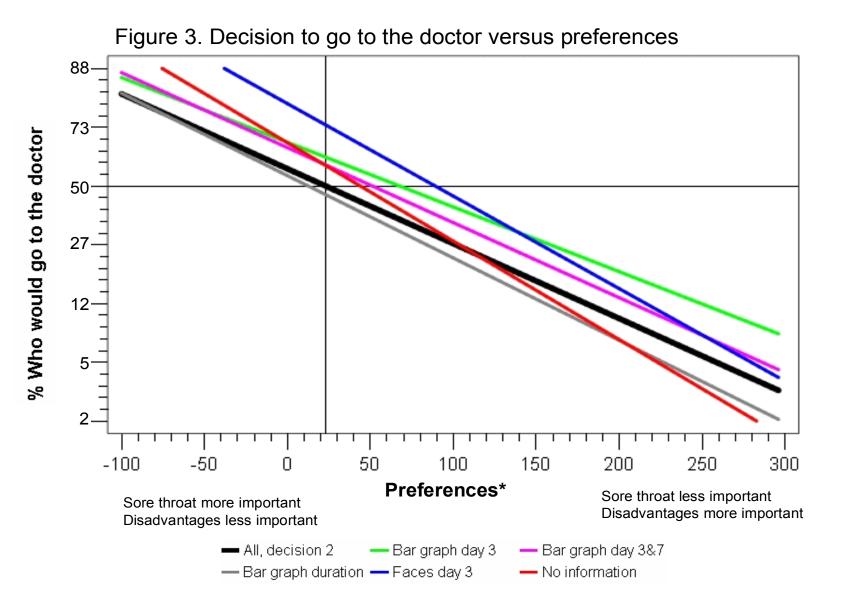


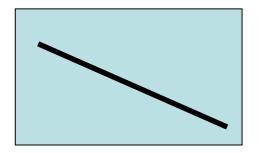


Start	Dag 1	Dag 2	Dag 3	Dag 4	Dag 5	Dag 6	Dag 7	
Uten penicillin								
100 av 100 har sår hals			66 av 100 har sår hals				18 av 100 har sår hals	
Med penicillin								
100 av 100			46 av 100				13 av 100	
har sår hals			har sår hals				har sår hals	



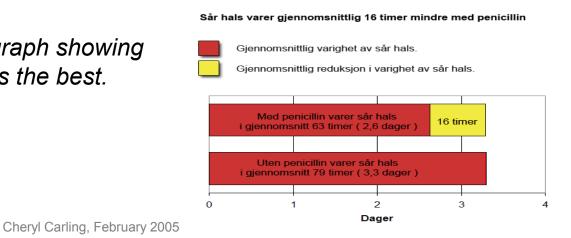
\_

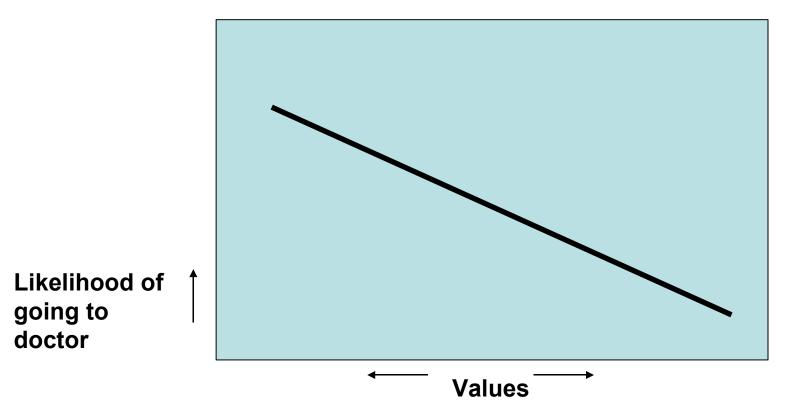




### Results

- The regression lines for all presentations went in the same direction as the "most well-informed decision" predictor line.
- The slope and the intercept for the presentation showing the duration of sore throat with and without treatment resembled most closely those of the predictor line.
- People liked the duration presentation best.
- Our conclusion was that the graph showing the duration of sore throat was the best.





Dislike sore throat symptoms Don't mind going to doctor, taking medicine, risking sideeffects, risking reinfection. Don't mind sore throat so much. Want to avoid going to doctor, taking medicine, risking sideeffects, risking reinfection.

## Limitations of the study

### Applicability

- Different people
- Different type of disease decision
- Hypothetical vs real decisions
- Mode of presentation

### **Lessons learned**

### Technical

- Accomodating browsers
- Tracking important
- Templates
- Recruitment

## **Future plans**

- Continue to refine methods for measuring values.

- Complete a systematic review on methods for eliciting values or preferences.

### **Publications**

Carling C. Schunemann H. Oxman A. How should information about the effects of healthcare be presented? <i>Medscape General Medicine</i> . <i>5(3):35, 2003 Sep 5.</i>	Published	
Carling C, Kristoffersen DT, Oxman AD et al. What is the effect of alternative graphical displays used to present the benefits of antibiotics for sore throat on decisions about whether to use them?	Under revision.	
Carling C, Kristoffersen DT, Oxman AD et al. What is the effect of different summary statistics used to present the benefits of cholesterol-lowering drugs on decisions about wheter to use them? Pilot study	Under revision.	
Carling C, Kristoffersen DT, Oxman AD et al. What is the effect of different summary statistics used to present the benefits of cholesterol-lowering drugs on decisions about whether to use them? Main study	Under revision	
Carling C, Kristoffersen DT, Oxman AD et al. What is the effect of positive and negative framing used to present the effects of antihypertensive drugs on the decisions about whether to use them.	Under revision	
Carling C, Kristoffersen DT, Oxman AD et al. What is the effect of presentations using words versus presentations using numbers used to present the effects of anti-depressents (SSRIs) on decisions on whether to use them?	Under revision	
Carling C, Kristoffersen DT, Oxman AD et al. Systematic Review: Instruments for measuring utility for health states	Protocol completed. Review expected completed end 2005.	

cherylca@cochrane.no

cheryl.carling@nhsrc.no

Hoping to hear from you!