

GATE FRAME

Rapid appraisals with GATE LITE (www.epiq.co.nz)

Dr. Wolter Paans

www.denkwerkerindezorg.nl



Information used from and inspired by Rod Jackson, EPIQ group, University of Auckland, NZ www.epiq.co.nz

Academie voor Verpleegkunde

Vorbereiding literatuurstudie

- Hoe lees ik een artikel?
- Te beginnen met 'abstract'
- Wat is de vraagstelling?
- Wat is de relevantie voor de patient?
- Wat zijn de conclusies en aanbevelingen?

Abstract: LOE

- Kwantitatief LOE 1: RCT
- Kwalitatief LOE 4: Descriptief /Exploratief

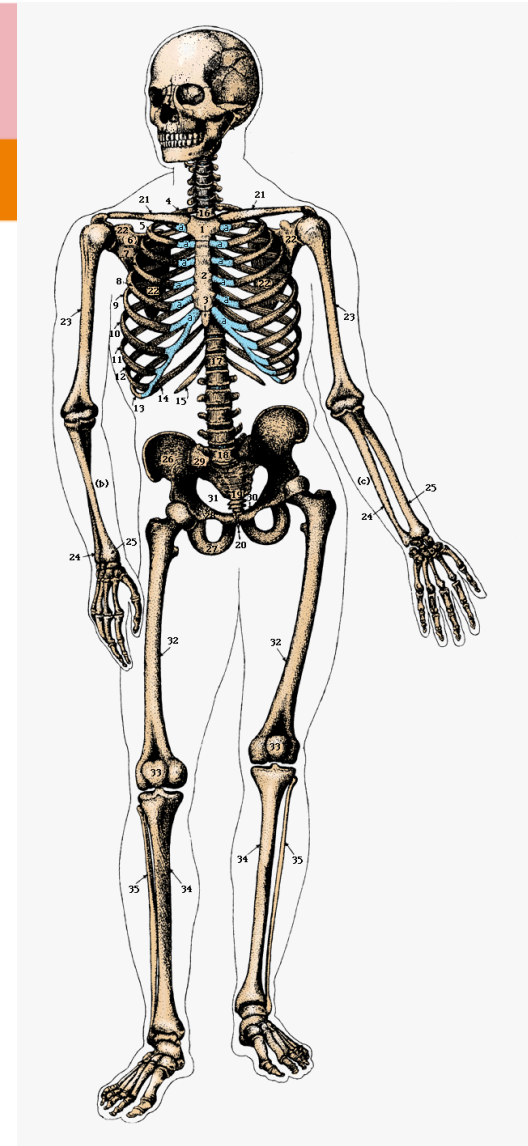
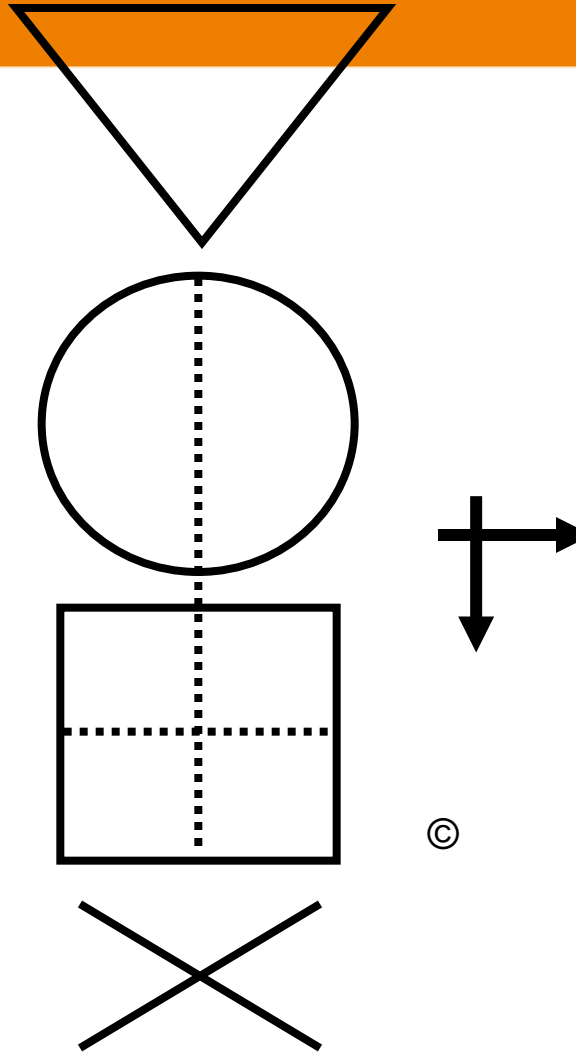
Casus

- Formuleer / omschrijf situatie
- P= M/V, Leeftijd, Med.diagn/ Verpl.diagn, Achtergrond variabelen (specifieke gegevens: b.v. 'primi para' of 'met valrisico')
- Verpleegkundige diagnose in PES
- Formuleer beantwoordbare vraag
- Formuleer vervolgens (mogelijke) interventie en (mogelijke) co-interventie

PICO

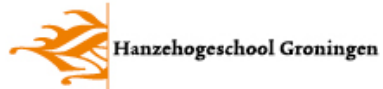
- Maak vervolgens een PICO en vul hem gedurende de literatuurstudie verder en steeds vollediger in.

The GATE frame



Graphic Approach To Epidemiology

PECOT: the 5 parts of every epidemiological study

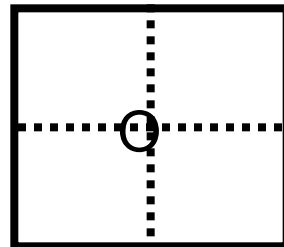
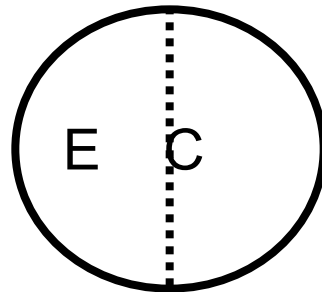
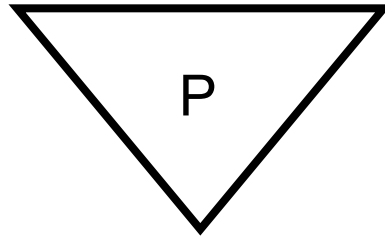
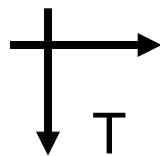


Hanze Hogeschool Groningen

Participants

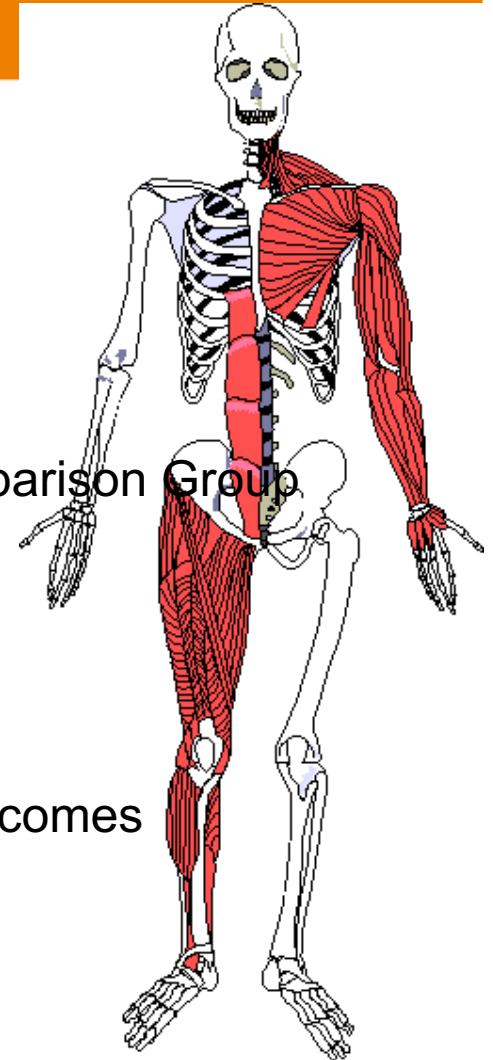
Exposure Group

Time



Comparison Group

Outcomes



All epidemiological studies can be hung on the GATE frame

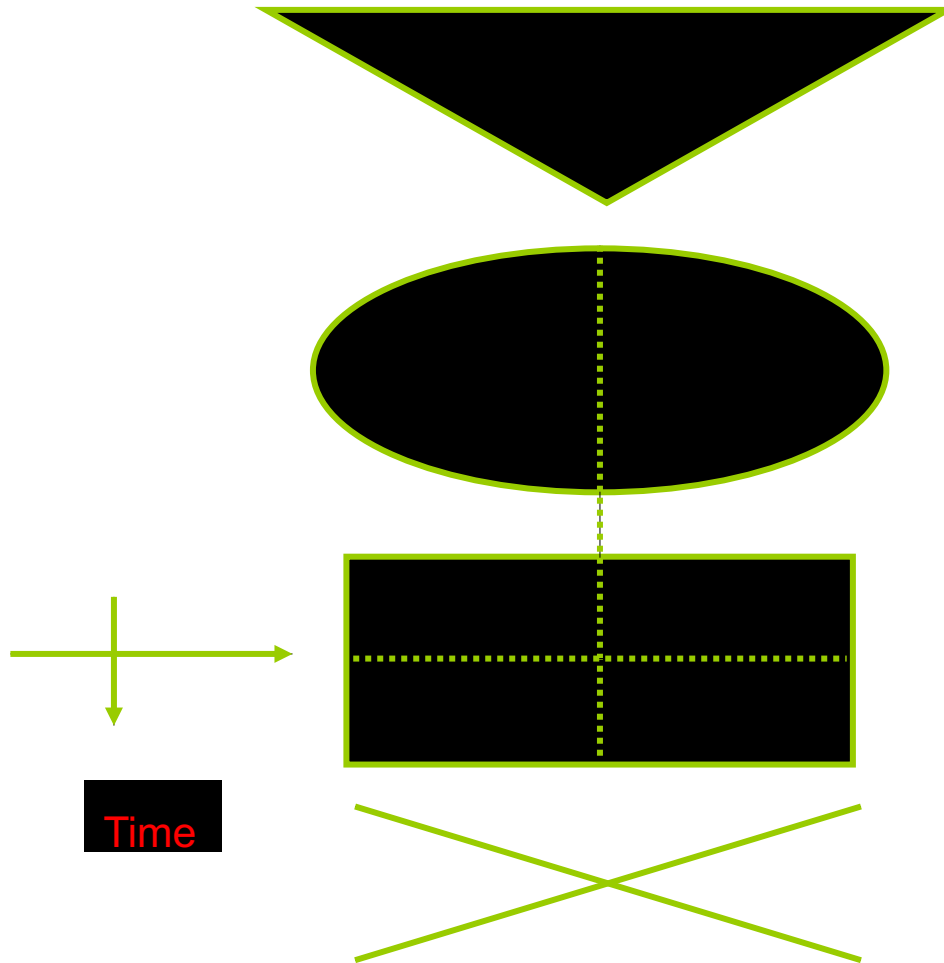
EBP Step 1: ASK - turn your question into 5 parts (PECOT)

1. **Participants** (patient(s) you want to treat)
2. **Exposure** (an intervention if about therapy)
3. **Comparison** (there is always an alternative! - another therapy, nothing ...)
4. **Outcome** (usually a disease or condition you want to prevent or manage)
5. **Time frame** (over which you expect a result)

Graphic Appraisal Tool for Epidemiology



- Rod Jackson
- EPIQ group
- University of Auckland, NZ
- www.epiq.co.nz



About 10% of published evidence is worth reading...



"...and, as you go out into the world, I predict that you will, gradually and imperceptibly, forget all you ever learned at this university."

No need for depression...

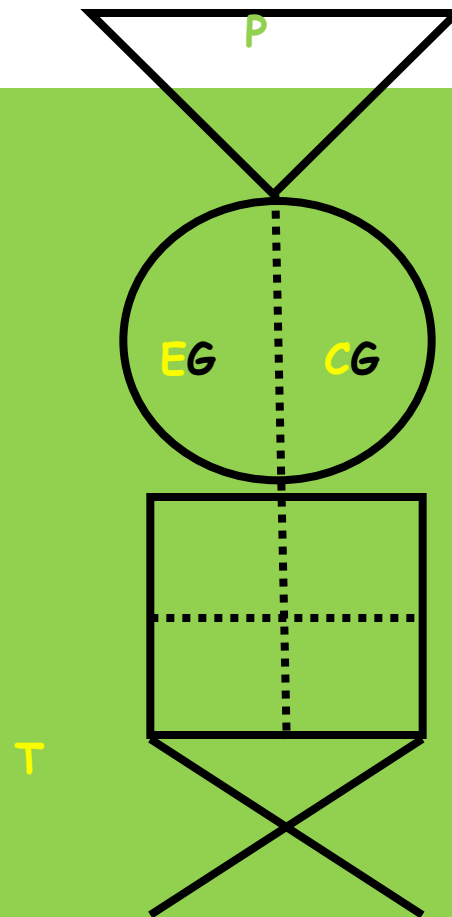


Play your GATE!

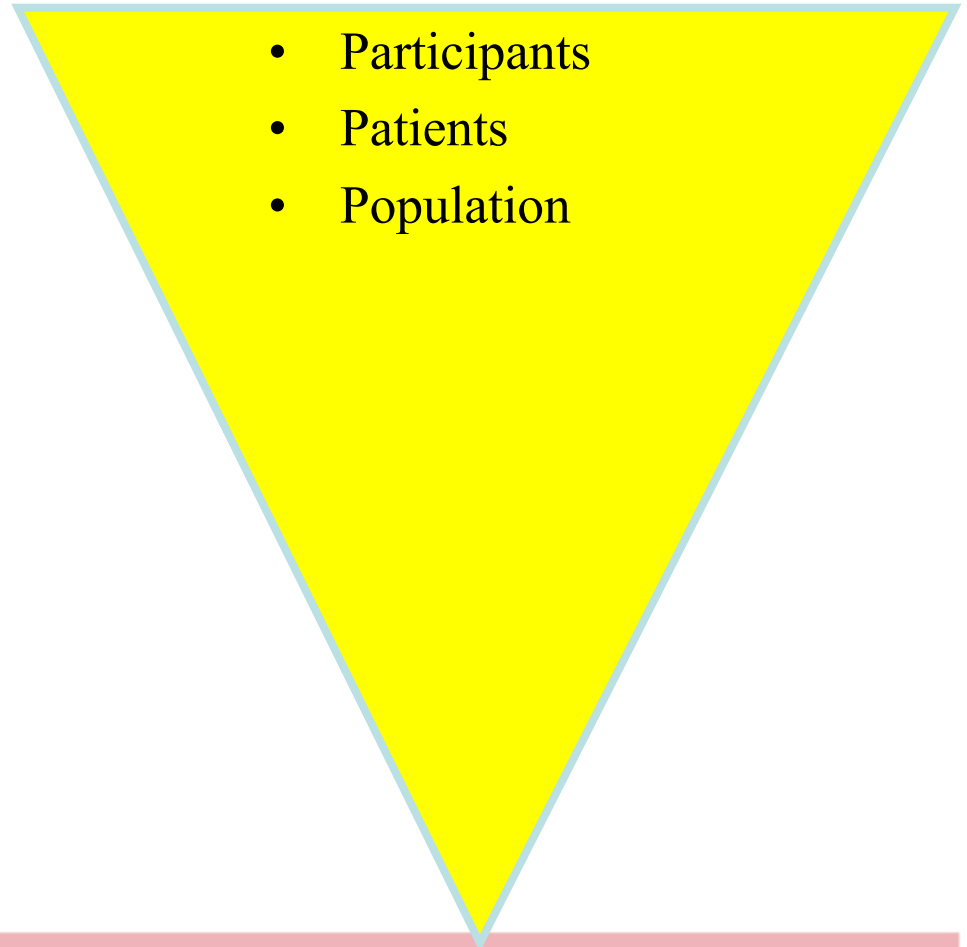
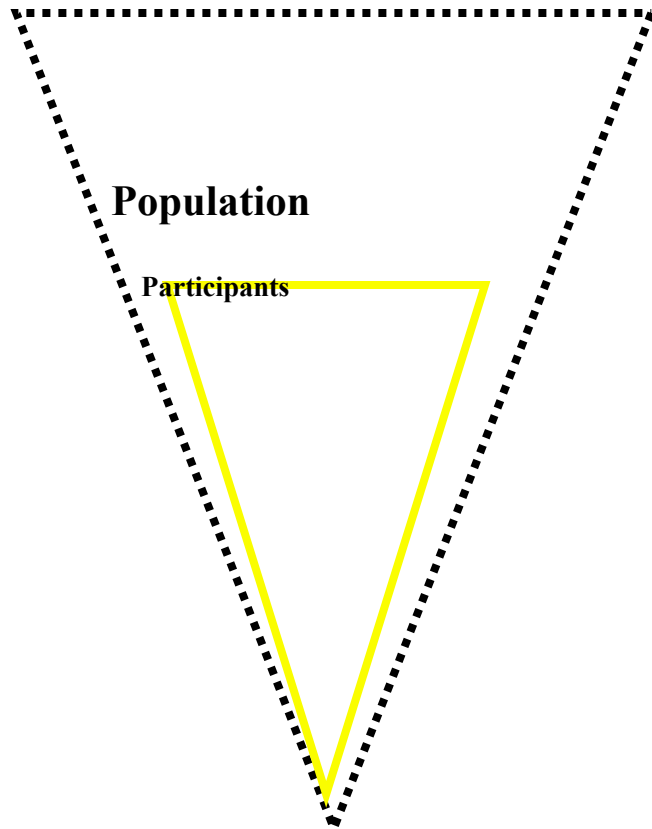


GATE Frame: PECOT (study design)

- Participants
- Exposure Group (Intervention)
- Comparison Group
- Outcome
- Time

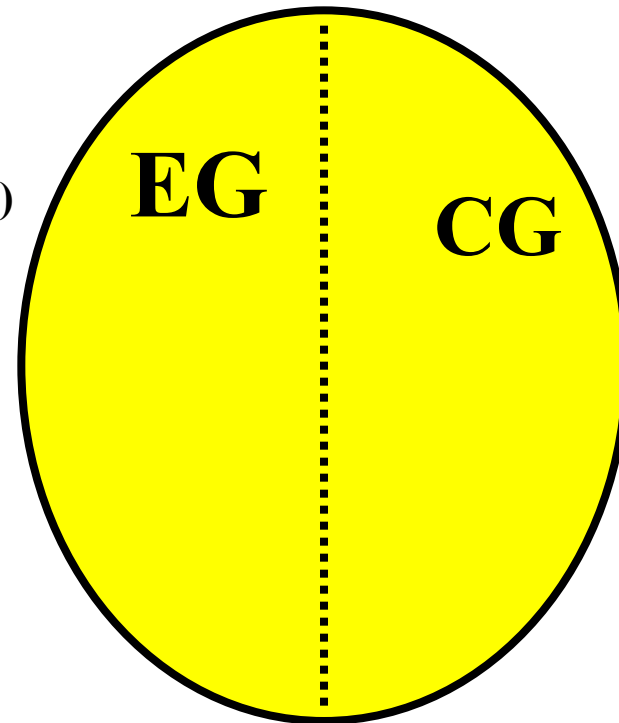


GATE: study design (P)



GATE: study design (E & C)

Exposure Group (EG)
[intervention]

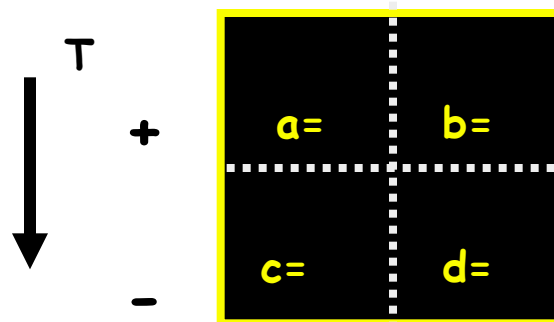


Comparison Group (CG)
[control]



GATE: Study analyses

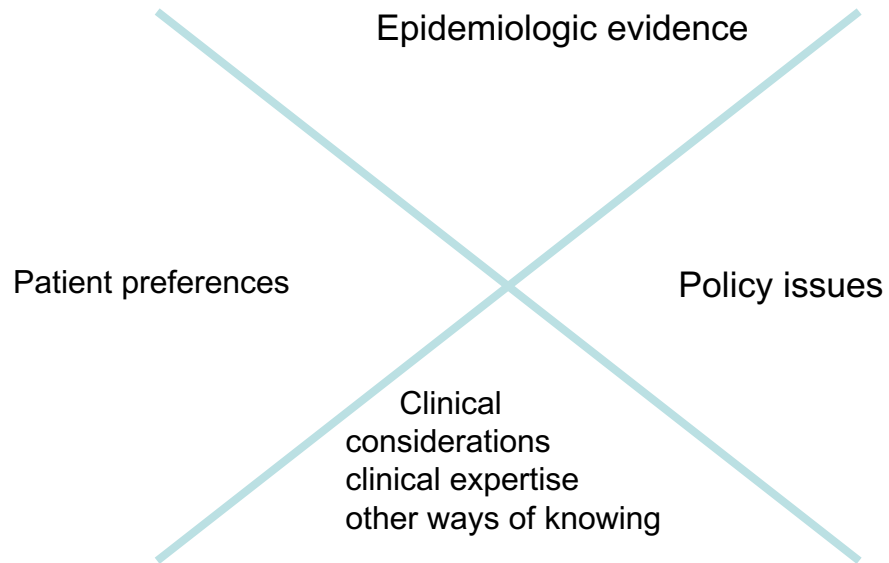
Numerators =
a or c and b or d



Denominators =
EG (x T) and CG (x T)

Epidemiology is
the study of
occurrence
= numerator /
denominator
($E=N/D$)

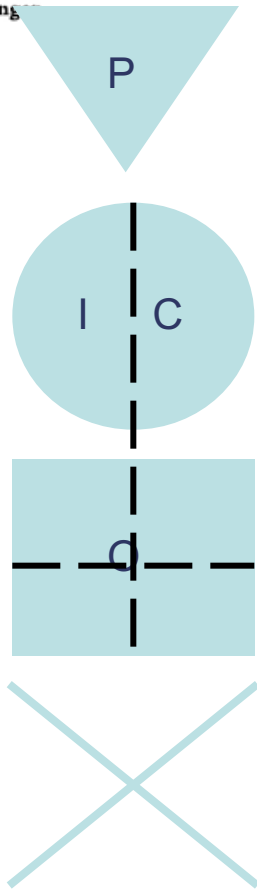
X-factor



The 6 steps of Evidence Based Practice

1. ASK a focussed question
2. ACCESS - search for epidemiological evidence to help answer question
3. APPRAISE the evidence for its validity, effect size, precision
4. AGGREGATE the evidence with patient/community, clinical/hlth & policy issues & make an evidence-based decision
5. APPLY your decision
6. [AUDIT your practice (i.e. check your actual practice against evidence-based practice on a regular basis)].

GATE-frame



P=

I=

C=

O=

GATE: Graphic Approach to Teaching EBP

Let's have a smoke! Yes we can...





• [Int J Nurs Stud.](#) 2008 Apr;45(4):508-17. Epub 2006 Dec 19.

• **Does additional support by nurses enhance the effect of a brief smoking cessation intervention in people with moderate to severe chronic obstructive pulmonary disease? A randomised controlled trial.**

• [Wilson JS](#), [Fitzsimons D](#), [Bradbury J](#), [Stuart Elborn J](#).

• **Source**

• Regional Respiratory Centre, Belfast City Hospital Trust, Belfast BT9 7AB, N. Ireland, UK. julie.wilson@bch.n-i.nhs.uk

• **Abstract**

• **BACKGROUND:**

• Smoking cessation is the primary disease modifying intervention for chronic obstructive pulmonary disease (COPD).

• **SETTING:**

• A Regional Respiratory Centre (RRC) out-patient department in Northern Ireland.

• **METHODS:**

• A randomised controlled trial (RCT) evaluated the effectiveness of brief advice alone or accompanied by individual nurse support or group support facilitated by nurses. Smoking status was biochemically validated and stage of change, nicotine addiction and dyspnoea were recorded at 2, 3, 6, 9 and 12 months.

• **PARTICIPANTS:**

• Ninety-one cigarette smokers with COPD were enrolled in the study (mean age 61 years, 47 female).

• **RESULTS:**

• After 12 months cessation rates were not significantly different between groups ($p=0.7$), but all groups had a significant reduction in their nicotine addiction ($p=0.03-0.006$). No changes in subjects' motivation or dyspnoea were detected over the 12 months.

• **CONCLUSION:**

• Patients with COPD were unable to stop smoking regardless of the type of support they received. Harm reduction may be a more appropriate goal than complete cessation for intractable smokers and nurses must evaluate their role in this arena.

Example

Stap 1

Stap 2

Stap 3

Afsluiting

P=smoking adults with COPD

64

Intervention
(Group Interv.)

29

35

Comparison
(Usual Care)

Yes
no

Q

yes

no

Carbon

Monoxide in blood **lower**
(Is nicotine addiction
decreased?)

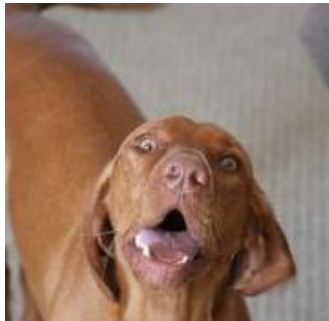
Baseline = 17.2

GI UC

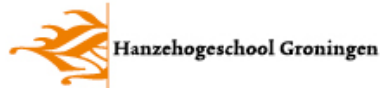
	GI	UC
yes	3	2
no	26	33

X-factor questions

- Is there evidence?
- Can we use the intervention from a clinical perspective? Why (not)?
- Are patient preferences clear?
- What political /ethical issues are there?



PICO: the 5 parts of every epidemiological study



Participants

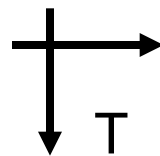
629

Exposure Group

306 323

Comparison Group

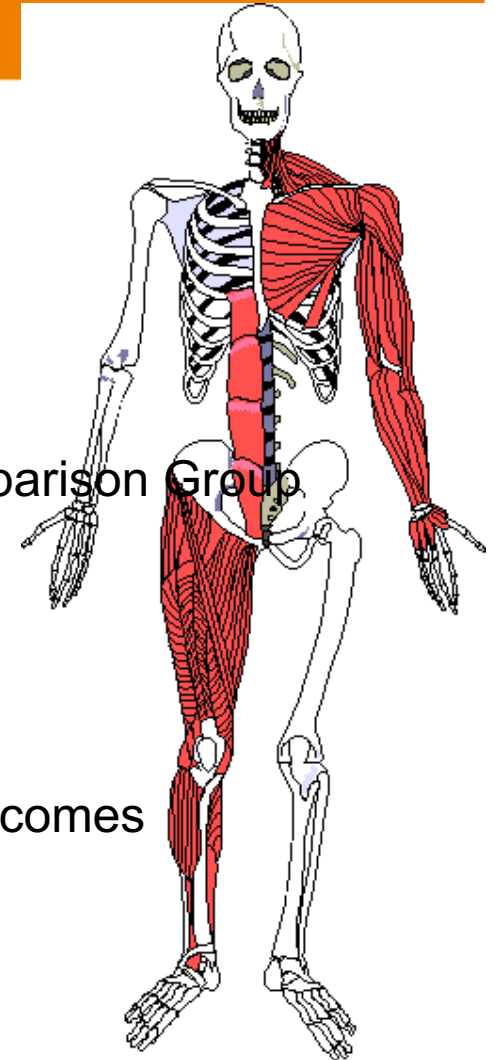
Time



30 52

276 271

Outcomes

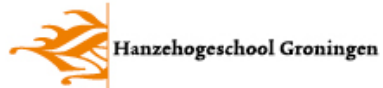


All epidemiological studies can be hung on the GATE frame

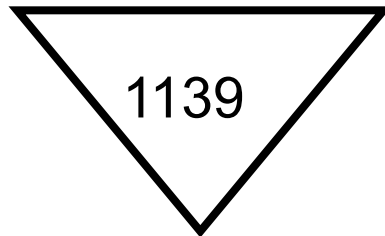
And there is..... Circumcision....



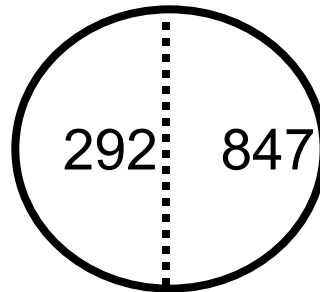
PECOT: the 5 parts of every epidemiological study



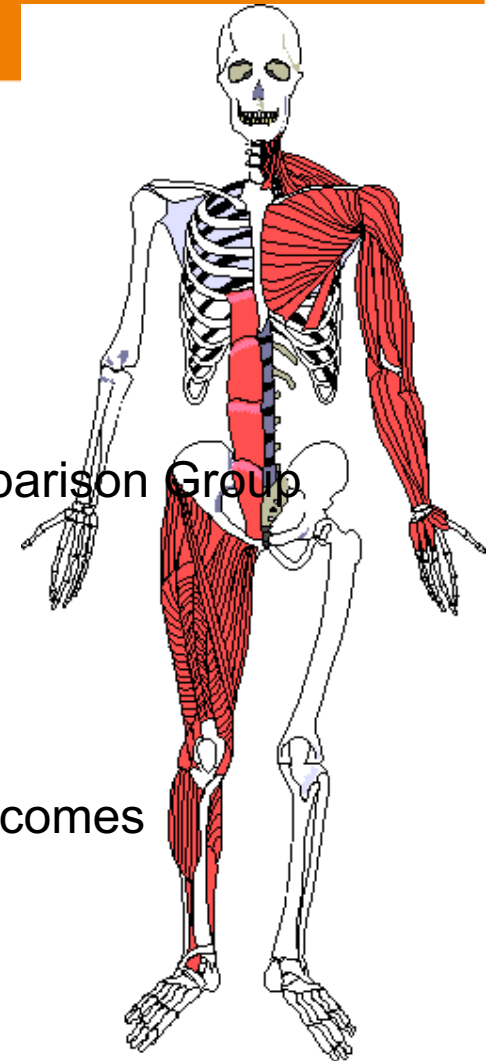
Participants



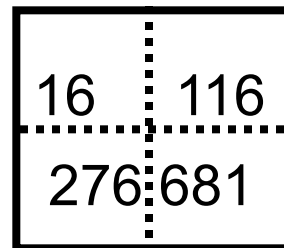
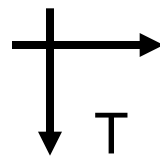
Exposure Group



Comparison Group



Time



Outcomes

All epidemiological studies can be hung on the GATE frame

- 16 (HPV+ en CIRC) = 5% HPV
- 166 (HPV+ en geen CIRC) = 19% HPV
- 276 (HPV- en CIRC)
- 681 (HPV- en geen CIRC)

What can you find in the abstract?

- **Male circumcision, penile human papillomavirus infection, and cervical cancer in female partners.**
- [Castellsagué X](#), [Bosch FX](#), [Muñoz N](#), [Meijer CJ](#), [Shah KV](#), [de Sanjose S](#), [Eluf-Neto J](#), [Ngelangel CA](#), [Chichareon S](#), [Smith JS](#), [Herrero R](#), [Moreno V](#), [Franceschi S](#); [International Agency for Research on Cancer Multicenter Cervical Cancer Study Group](#).
- **Source**
- Servei d'Epidemiologia i Registre del Càncer, Institut Català d'Oncologia, Hospitalet de Llobregat, Barcelona, Spain. xcastellsague@ico.scs.es
- **Abstract**
- **BACKGROUND:**
- It is uncertain whether male circumcision reduces the risks of penile human papillomavirus (HPV) infection in the man and of cervical cancer in his female partner.
- **METHODS:**
- We pooled data on 1913 couples enrolled in one of seven case-control studies of cervical carcinoma in situ and cervical cancer in five countries. Circumcision status was self-reported, and the accuracy of the data was confirmed by physical examination at three study sites. The presence or absence of penile HPV DNA was assessed by a polymerase-chain-reaction assay in 1520 men and yielded a valid result in the case of 1139 men (74.9 percent).
- **RESULTS:**
- Penile HPV was detected in 166 of the 847 uncircumcised men (19.6 percent) and in 16 of the 292 circumcised men (5.5 percent). After adjustment for age at first intercourse, lifetime number of sexual partners, and other potential confounders, circumcised men were less likely than uncircumcised men to have HPV infection (odds ratio, 0.37; 95 percent confidence interval, 0.16 to 0.85). Monogamous women whose male partners had six or more sexual partners and were circumcised had a lower risk of cervical cancer than women whose partners were uncircumcised (adjusted odds ratio, 0.42; 95 percent confidence interval, 0.23 to 0.79). Results were similar in the subgroup of men in whom circumcision was confirmed by medical examination.
- **CONCLUSIONS:**
- Male circumcision is associated with a reduced risk of penile HPV infection and, in the case of men with a history of multiple sexual partners, a reduced risk of cervical cancer in their current female partners

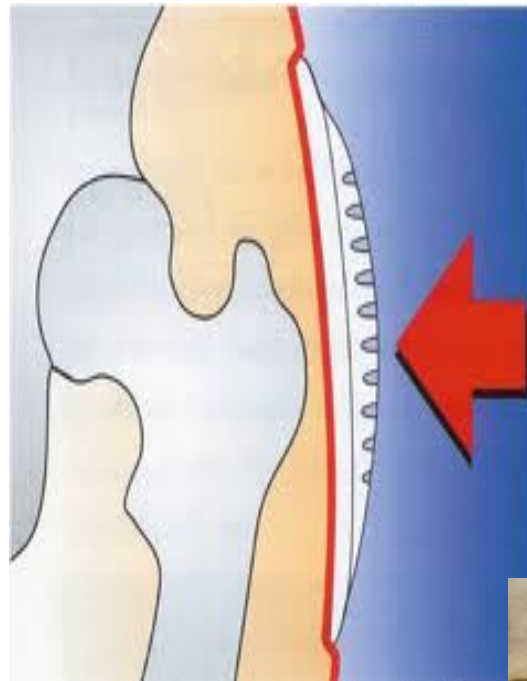
Draw your Gate Frame and answer the X-factor questions

- Is there evidence?
- What evidence?
- Who cares?
- Political / ethical issues?
- What about patient preferences?
- Clinical important?

And there is... light!



And there are fallen elderly....



Hip protectors for who...?



Can we calculate significance?

- *In case of a proper 2x2 table: yes we can!*
- Chi Square and Exact Measures of Association
- Risk-Based* Estimates and 95% Confidence Intervals
- Odds-Based Estimates and Confidence Limits

To perform statistics, go to

- [OpenEpi.com](http://www.openepi.com) via Google
- Or:

<http://www.openepi.com/OE2.3/Menu/OpenEpiMenu.htm>

To conclude..

A gate frame
can be used to
walk through, to a
new EBP
understanding....





Wolter Paans
Docent-onderzoeker
w.paans@pl.hanze.nl
www.denkwerkerindezorg.nl