

# Vroegherkenning en preventie: de toekomstige duurzame GGz

Mark van der Gaag PhD

# Disclosure belangen spreker

|  |   |
|--|---|
| (potentiële) belangenverstrengeling  | Geen  |
| Voor bijeenkomst mogelijk relevante relaties met bedrijven   | Geen  |
| <ul style="list-style-type: none"><li>• Sponsoring of onderzoeksgeld</li><li>• Honorarium of andere (financiële) vergoeding</li><li>• Aandeelhouder</li><li>• Andere relatie, namelijk ...</li></ul> | <ul style="list-style-type: none"><li>• Onderzoeksubsidies van ZonMW, Stichting tot Steun, Nuts Ohra</li><li>• Royalties van boeken, Boom Uitgeverij, Routledge</li></ul> |

# Wat zijn risicofactoren voor psychose?

Risicofactoren:

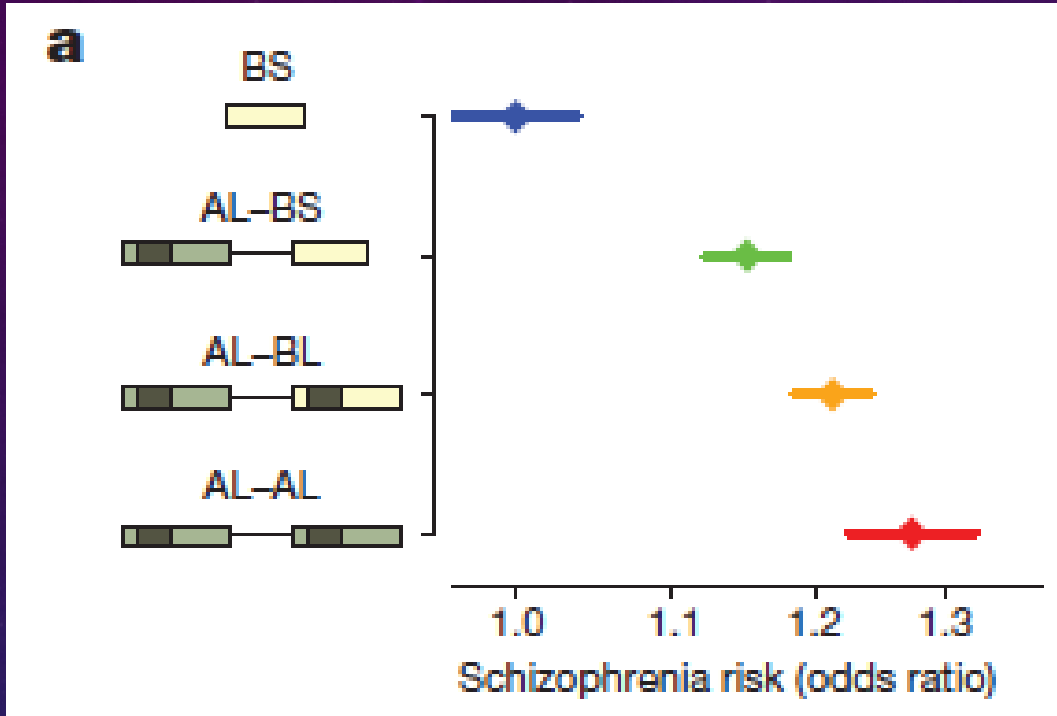
Component 4 proteïne immuumsysteem

1.2

## The New York Times

Health

Scientists Move Closer to  
Understanding Schizophrenia's  
Cause



7%

Alleles A and B  
Both Short and Long

31%

OR=1.2 in 83% of the  
population

41%

11%

Schizophrenia risk associated with four common structural forms of *C4* in analysis of 28,799 schizophrenia cases and 35,986 controls.

# Wat zijn risicofactoren voor psychose?

## Risicofactoren:

|  |      |
|--|------|
| Component 4 proteïne immuumsysteem     | 1.2  |
| Opgroeien in een grote stad            | 1.4  |
| Pesten                                 | 2.5  |
| Migratie                               | 2.9  |
| Tweede generatie Marokkaanse immigrant | 6.5  |
| Seksueel misbruik in de kindertijd     | 7.3  |
| UHR status                             | 1000 |

Ultrahoog risico is geen diagnose

Een set risicofactoren die de kans op transitie naar psychose met een factor 1000 vergroten (van 0.02% in de populatie naar minimaal 20% in de heterogene UHR groep)

# Arbitraire criteria in quasi-dimensioneel model

**Stemmen zijn volledig dimensioneel, d.w.z. zij treden op zonder associatie aan distress of zorgbehoefte**

**Stemmen zijn licht geassocieerd aan wanen en stemmen met beangstigende appraisal (machtig, kwaadwillend, alwetend) zijn quasi-dimensioneel, d.w.z. geassocieerd aan distress en zorgbehoefte**

Baumeister et al., 2016; Linscott en van Os, 2013

# Arbitraire criteria in quasi-dimensioneel model

**UHR is arbitrair risico gebied tussen normaliteit en psychose**

**Vergelijkbaar met diabetes**

**Bloedglucose normaal <5.7; prediabetes 5.7-6.4; diabetes  $\geq 6.5$**

**Vergelijkbaar met hoge bloeddruk**

**Normaal 120/80; prehypertensie 120-139/80-89; hypertensie 140/90**

Is transitie naar psychose puur arbitrair of een ander stadium?

## Ultra High Risk

Help-seeking

Insight and illness Awareness

Doubt and multiple interpretations for odd experiences

Open to psychoeducation

No acting on tentative delusional explanations

Psychosis

12% (CBT 1.5-yr: vdGaag ea, 2012)

35% (10+-year: Nelson et al., 2013)

## First Episode Psychosis

Non help-seeking

Loss of insight and awareness

Delusional certainty

Tolerates no other explanations

Acts on delusions

Recurrent/ persistent Psychosis

84% (3-year: Fusar-Poli, 2016)

86% (lifetime: Jääskeläinen, 2013)



# Succes preventie van hart en vaatziekten

**Tussen 1997 en 2007 een reductie van 48% sterfte aan hart- en vaatziekten [van 269 naar 141 per 100.000]**

**37% van de daling door behandeling hartfalen (11%) en chronische angina pectoris(9%)**

**36% van de daling door beïnvloeden risicofactoren zoals bloeddruk (30%), cholesterol (10%), roken (5%) en fysieke inactiviteit (1%).**

Koopman et al., 2016

# Succes van cognitieve gedragstherapie bij preventie van transitie

## Meta-analyse (recent)

**7 studies 12 maanden follow-up**

**Risicoreductie is 40%**

**3 studies 48 maanden follow-up**

**Risicoreductie is 35%**

# Prognosis in different stages

|                           | Remission | Persistence | Psychosis | Stage                    |
|---------------------------|-----------|-------------|-----------|--------------------------|
| 1a PLE                    | 84%       | 8%          | 8%        | Hanssen et al 2005       |
| 1b UHR help-seeking       | 46%       | 27%         | 27%       | Simon et al 2013         |
| 1b UHR EDIE control group | 57%       | 19%         | 24%       | Van der Gaag et al, 2012 |
| 1b UHR EDIE exper. group  | 71%       | 17%         | 12%       | Van der Gaag et al, 2012 |

| Stage                              | Single episode      | Multipiele episodes | Permanent psychosis | Reference  |
|------------------------------------|---------------------|---------------------|---------------------|--|
| 2 FEP                              | 16%<br>≥3-years F-U | 84%                 |                     | Fusar-Poli et al, 2016                           |
| 3abc - 4<br>Recurrent<br>Psychosis | 14%                 | 76%                 | 10%                 | Jääskeläinen et al, 2013<br>Wiersma et al., 1996 |

# Progression to psychosis → Worse outcome at 48- months

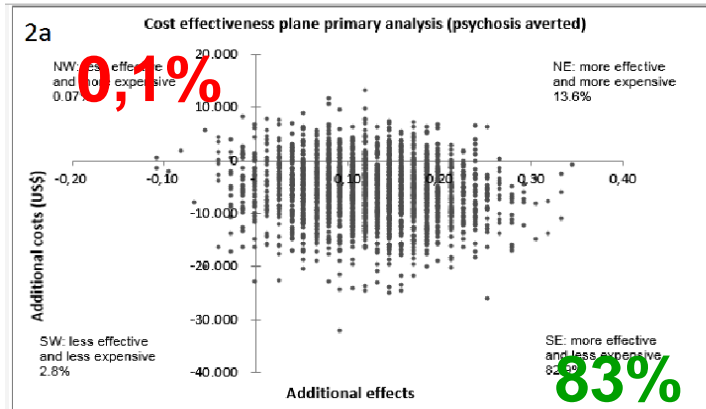
- **CAARMS**
  - More positive symptoms with more distress
  - More cognitive problems
  - More negative symptoms
  - More emotional disturbance
  - Poorer social functioning

- Ising et al., 2016

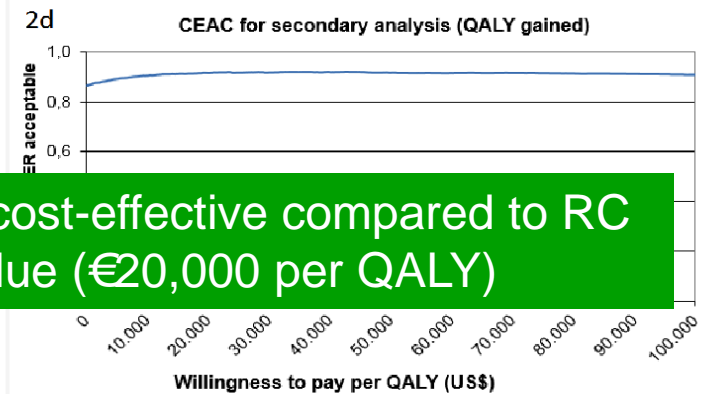
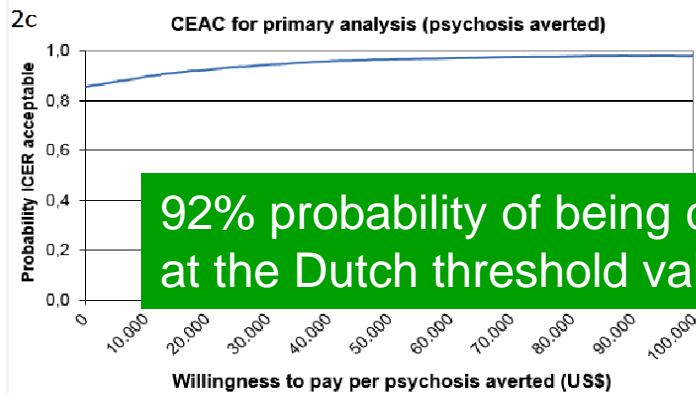
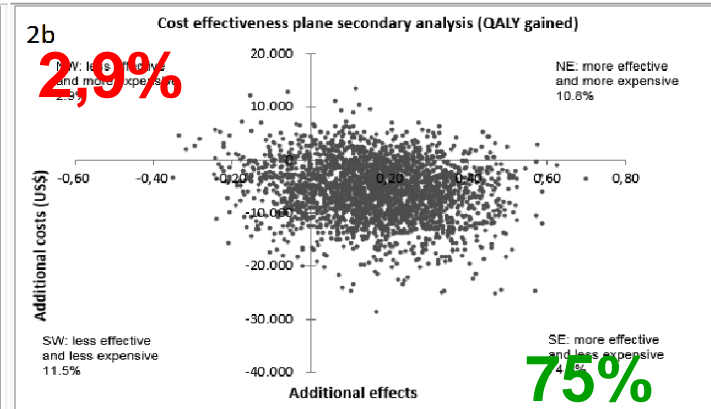
An aerial photograph of a terraced agricultural field. The field is divided into numerous rectangular plots by low, rustic stone walls. The soil within the plots is a deep, dark color, possibly volcanic ash or rich black soil. Some plots contain small green plants, while others are empty. The overall layout is a grid-like pattern of stone-walled terraces.

# **ECONOMIC COSTS AT 4-YEAR FOLLOW-UP**

## Preventie psychose 48 maanden



## Gewonnen QALYs 48 maanden



92% probability of being cost-effective compared to RC at the Dutch threshold value (€20,000 per QALY)

**Table 3.** Results of the Main and Sensitivity Analyses

|   | Incremental costs, US\$ | Incremental effects | ICER, US\$ (mean) | ICER, US\$ (bootstrapped median) | ICERs in SE quadrant (%) |
|---|-------------------------|---------------------|-------------------|----------------------------------|--------------------------|
| <b>Cost-effectiveness analyses</b>                      |                         |                     |                   |                                  |                          |
| Main analysis: healthcare perspective (EM) <sup>a</sup> | -5,777                  | 0.12 PP             | -62,689           | -43,109 <sup>c</sup>             | 82.9                     |
| Healthcare perspective (LOCF) <sup>a</sup>              | -6,952                  | 0.09 PP             | -92,233           | -66,185 <sup>c</sup>             | 80.5                     |
| Main analysis: societal perspective (EM) <sup>b</sup>   | -11,958                 | 0.12 PP             | -136,169          | -95,842                          | 85.8                     |
| Societal perspective (LOCF) <sup>b</sup>                | -10,407                 | 0.09 PP             | -136,794          | -102,718                         | 77.6                     |
| <b>Cost-utility analyses</b>                            |                         |                     |                   |                                  |                          |
| Healthcare perspective (EM) <sup>a</sup>                | -5,777                  | 0.16 QALYs          | -24,294           | -22,965 <sup>c</sup>             | 74.8                     |
| Healthcare perspective (LOCF) <sup>a</sup>              | -6,952                  | 0.22 QALYs          | -31,010           | -22,407 <sup>c</sup>             | 78.4                     |
| Societal perspective (EM) <sup>b</sup>                  | -11,958                 | 0.16 QALYs          | -55,303           | -49,422                          | 76.0                     |
| Societal perspective (LOCF) <sup>b</sup>                | -10,407                 | 0.22 QALYs          | -34,011           | -31,874                          | 72.7                     |

Preventing psychosis

Gaining one Quality Adjusted Life Year

Note: EM, expectation Maximization; ICER, incremental cost-effectiveness ratio; LOCF, last observation carried forward; QALYs, quality-adjusted life years; PP, prevented psychosis; SE, southeast.

<sup>a</sup>The healthcare perspective included the following costs over 48 months: add-on CBTuhr intervention costs, direct medical costs (other than the CBTuhr intervention), and participants' travel costs.

<sup>b</sup>The societal perspective included the following costs over 48 months: add-on CBTuhr intervention costs, direct medical costs (other than the CBT intervention), participants' travel costs, and costs stemming from lower productivity.

<sup>c</sup>Dominant, i.e. falling in the southeast-quadrant of the ICER plane.

## De implementatie in de Nederlandse GGZ bespaart geld en wint gezondheid

Nederlandse bevolking: 17,000.000

- €10.400.000 per jaar kostenbesparing (directe kosten)
- 450 minder eerste episode psychose patiënten
- 15% reductie in de prevalentie van psychotische patiënten



An aerial photograph of a terraced field, likely in a mountainous region. The field is divided into numerous small, irregular plots by low, rustic stone walls. The plots are arranged in a somewhat regular, grid-like pattern, though the walls are uneven and the plots vary in size. The ground between the walls appears to be dark, possibly due to shadows or the color of the soil. There are some small green plants and shrubs scattered throughout the field, particularly in the lower-left and lower-right areas. The overall scene is a complex, maze-like pattern of stone walls and dark plots.

**Thank you for your attention!**

**MARK VAN DER GAAG PhD**

**HEAD OF PSYCHOSIS RESEARCH PARNASSIA PSYCHIATRIC INSTITUTE, DEN HAAG  
PROFESSOR OF CLINICAL PSYCHOLOGY AT VU UNIVERSITY, AMSTERDAM**

**[m.vander.gaag@vu.nl](mailto:m.vander.gaag@vu.nl)**