



# **Suicidal behavior in older adults**

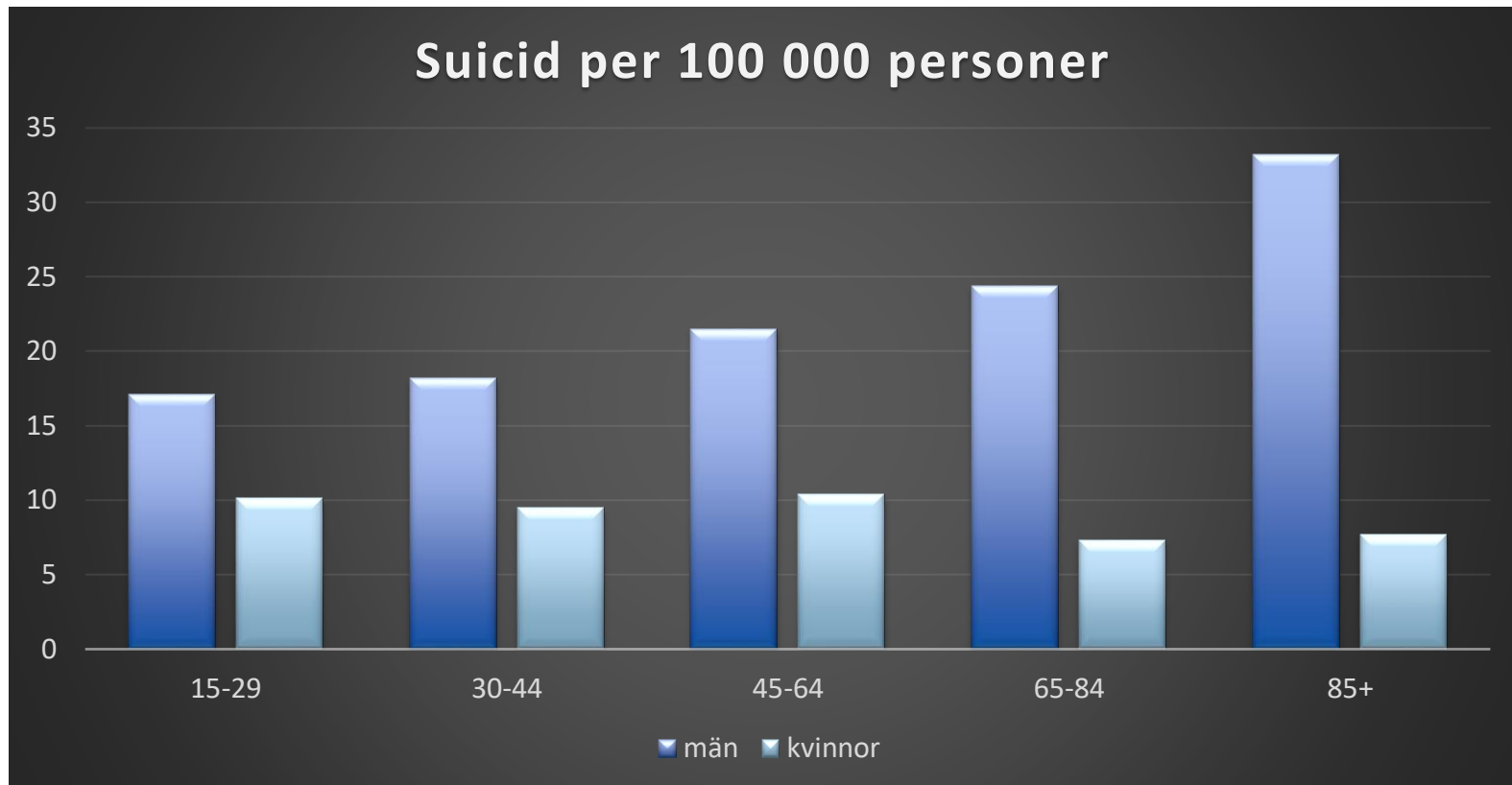
## **New research**

Margda Waern, prof, överläkare  
Sahlgrenska universitetssjukhuset  
AgeCap Center for Aging and Health  
Göteborgs universitet



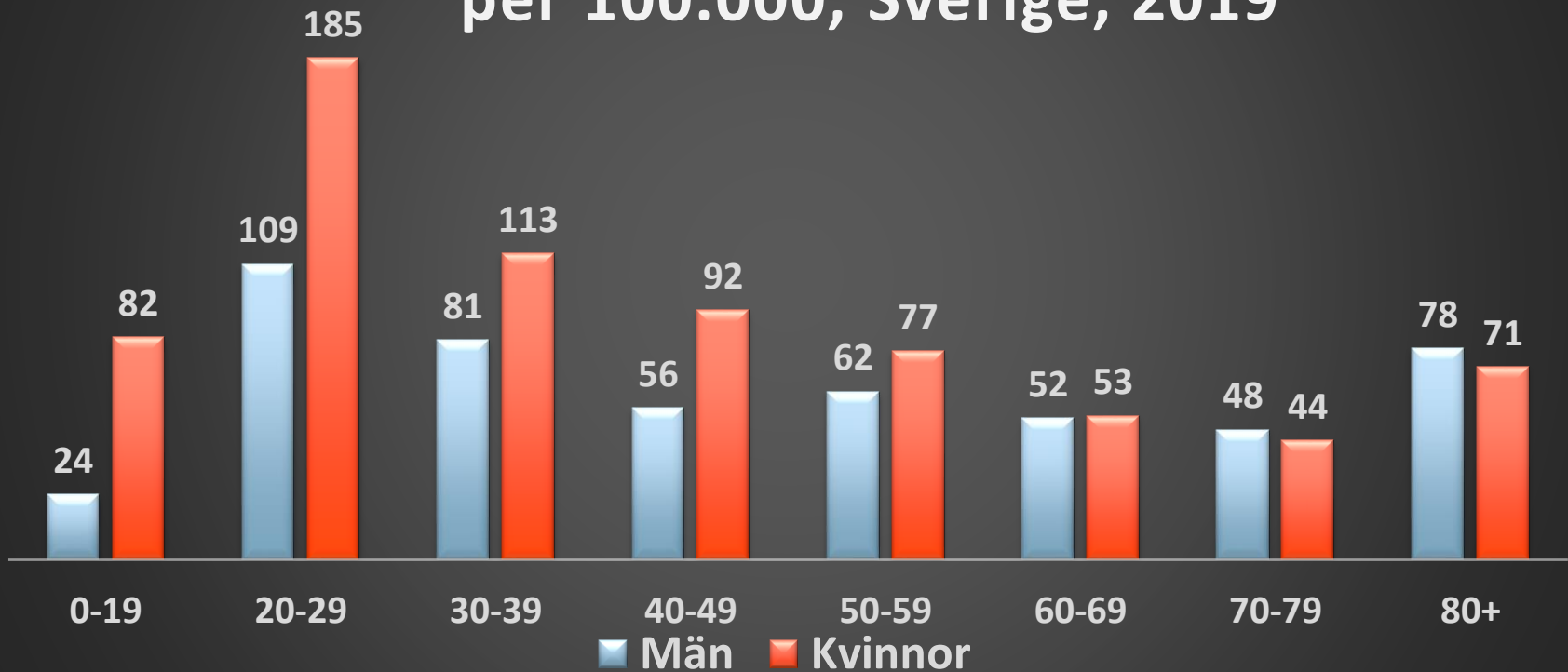


# Suicide rates in Sweden 2019



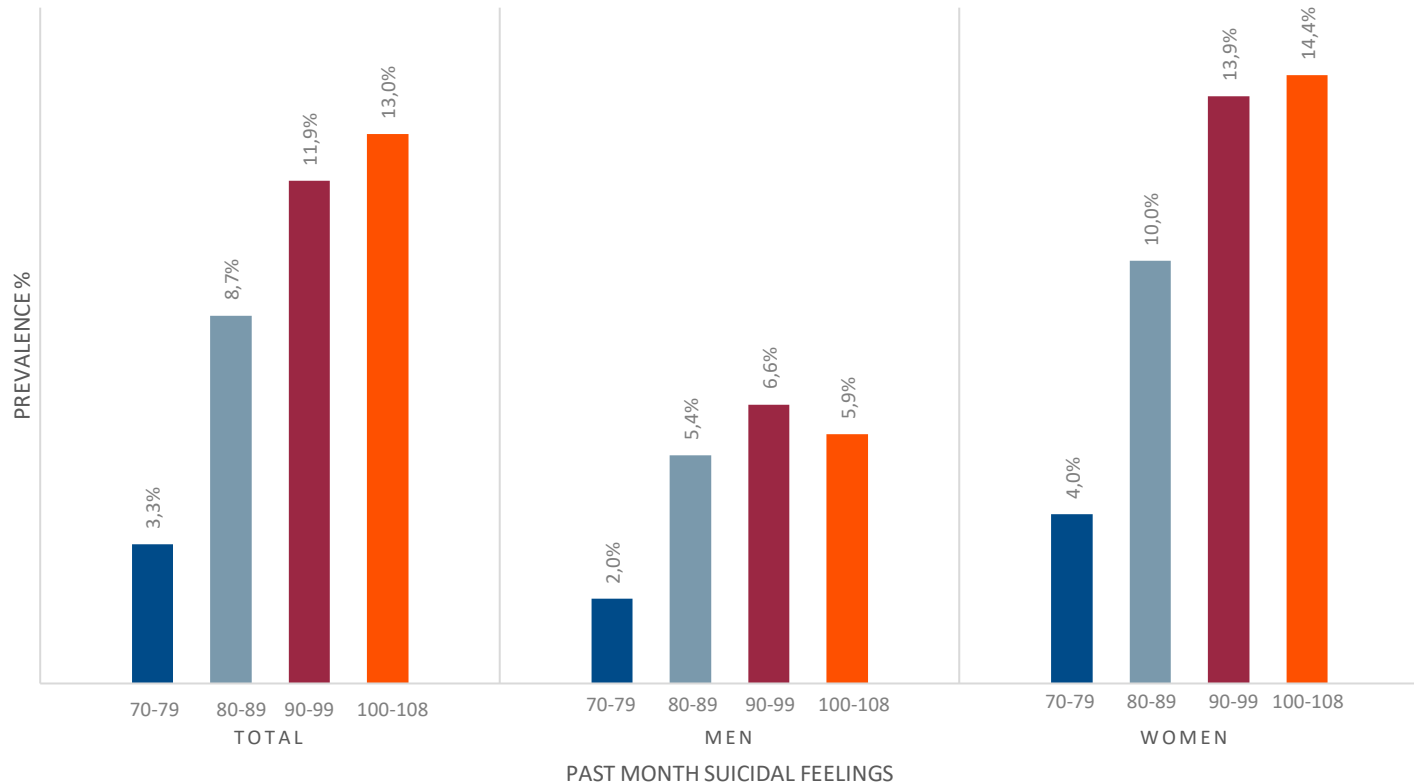


## Certain and uncertain suicide attempts per 100.000, Sverige, 2019





# Past month suicidal feelings in population-based samples





# Suicidal feelings 70+

- Lifetime prevalence 25.2%.
- The majority of participants consistently reported no experience of suicidal feelings over multiple examination times
- Fluctuation was more common in women compared with men.





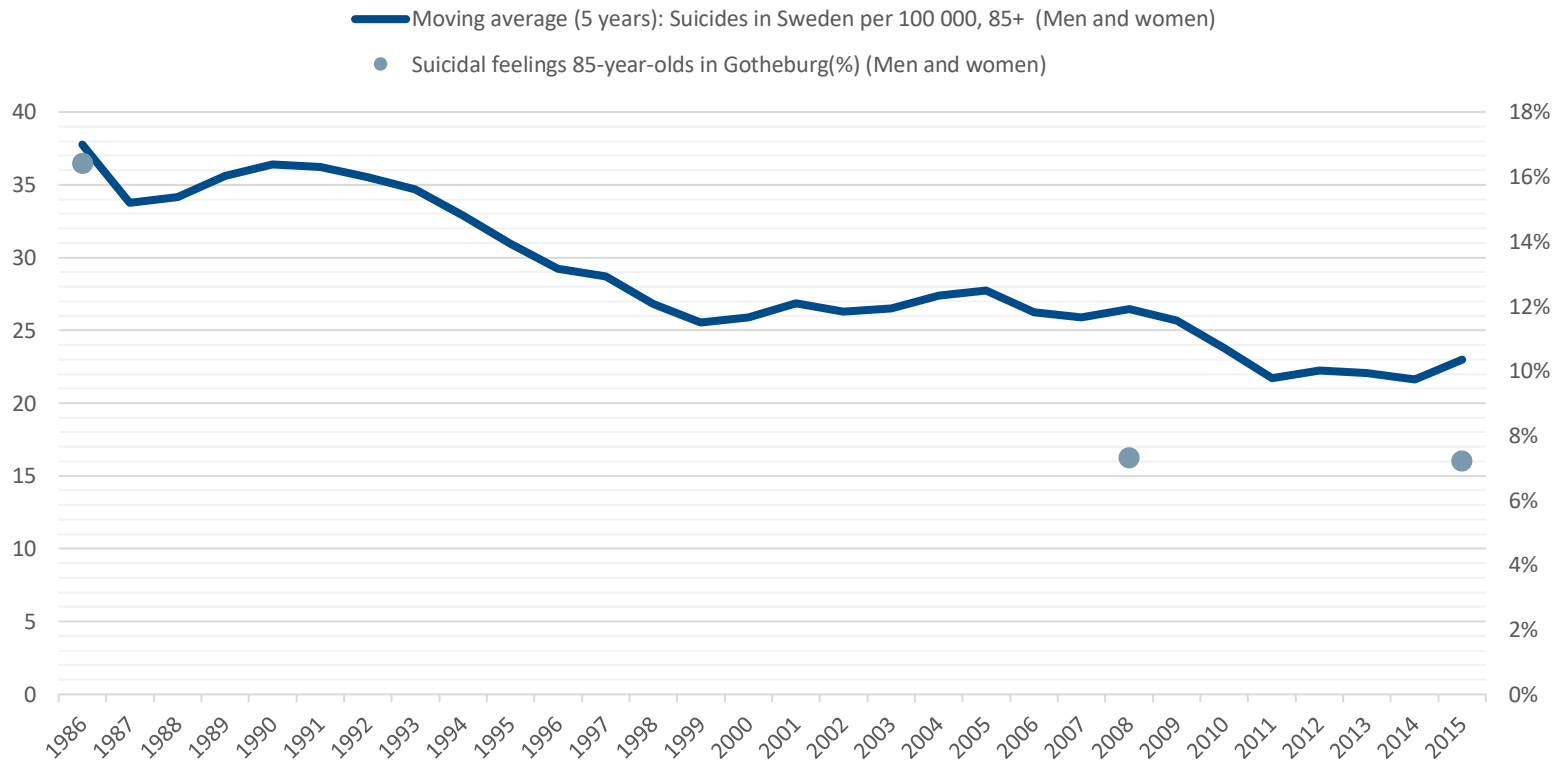
## One-month prevalence of suicidal feelings in three birth cohorts of 85-yr-olds

	<u>1986</u>	<u>2008</u>	<u>2015</u>
	%	%	%
Life not worth living	12.8	6.7	5.1
Wished for death	12.2	5.6	5.1
Thought of taking own life	3.8	1.4	1.3
Seriously considered suicide	0.6	1.2	-
Attempted suicide	-	0.2	-
Any of the above	15.9	8.1	6.8





# Time trends in Sweden 1986-2015





## Biological markers of late life suicidality (?)

- We aimed to investigate associations between suicidal ideation and 3 CSF markers in a population-based sample of older women:

**YKL-40**, a marker of glial activation

**GAP-43** (Growth-associated protein 43), a marker of neuronal plasticity

**MBP** (myelin basic protein), a marker of neurodegeneration

Rymo et al, Acta Psych Scand 2017







# CSF YKL-40 and GAP-43 are related to suicidality in older women

- Higher CSF levels of both YKL-40 and GAP-43 were detected in women with past month suicidal ideation.
- Associations remained for both biomarkers in regression models adjusted for smoking status, BMI and age.
- Relationships could not be explained by depression status.
- **Conclusion:** Disrupted synaptic glial functioning and inflammation may be related to the aetiology of suicidal ideation in older adults.





## Cognitive performance in suicide attempters (70+) and a MADRS-matched population-based comparison group

- Suicide attempters had lower MMSE scores than depressed comparison persons in the population.
- They showed poorer performance on tests of pentagon drawing and abstract thinking.
- Cognition was NOT improved in attempters at one year follow up, despite significant improvement in MADRS scores.





## Is late-onset suicidal behaviour a dementia prodrome?

- **Methods: 278 older adults (50+)**
- **Results:** Both attempter groups displayed worse executive functioning than nonsuicidal depressed older adults.
  - Late-onset attempters additionally displayed
    - poorer global cognition and processing speed than nonsuicidal depressed older adults
    - poorer memory than early-onset attempters.
- **Conclusions:** Late-onset suicidal behavior is associated with worse performance in a broad range of cognitive domains, possibly reflective of a dementia prodrome.





## Medically serious\* suicidförsök vs non-serious (70+)

- Scores on the Geriatric Depression Scale did not differ.
- However, those with medically serious attempts scored
  - higher on the Brief Scale of Anxiety
  - lower on the Mini Mental State Examination.
- Medically serious attempters more often attributed the attempt to
  - Social problems
  - Problems relating to functioning and autonomy
  - But not perceived burdensomeness

\*treatment in a specialized unit (intensive care), surgery under general anesthesia or extensive medical treatment





# Predictors of serious suicidal behaviour in late life depression

- Independent predictors of fatal/near-fatal suicidal behavior
  - male gender, worst lifetime suicidal ideation, and deficits in cognitive control,
- Independent predictors of less lethal suicidal behavior
  - introversion, history of suicide attempt, and earlier age of onset of depression.





# Suicide 75+

## A national register study

- 70% of the suicides were among men
- The suicide rate in men on ADs was over four times higher than women on ADs.
- Being unmarried was a risk factor for suicide in men but not in women.
- Being born outside of Nordic countries was associated with increased suicide risk.
- Lower risk in blue-collar women who used ADs, whereas a higher risk was found in blue-collar men who did not.





# Sources of emotional support and active/passive suicidal thoughts

- Representative US sample of adults 65+ (NHANES, N = 3,114)
- Overall, an additional category of source of emotional support was associated with the 0.36-fold lower odds of endorsing thoughts of death or self-harm.
- Differential results by gender and ethnicity
  - The above association was seen
    - in women and non-Hispanic Black older men
  - increase in the variety of sources of emotional support was associated with **increase** in the odds of endorsing thoughts of death or self-harm
    - in non-Hispanic White older men and Hispanic older men.





## Prescription patterns and suicide in new users of antidepressants aged 75+

- 295 suicides
- Switching antidepressant: two-fold risk for suicide
- Elevated suicide risks were also observed in those who concomitantly filled prescriptions for anxiolytics (HR 1.5), and hypnotics (HR 2.2).
- Lowered risk in those with prescriptions for antimentia drugs.







## Antidepressant use and suicide rates (per 100 000) 75+

AD use	Total	Men	Women
None	13	21	6
Any	34	71	19
SSRI	25	48	16
Mirtazapine	42	94	19
Any combo	65	143	35

