Deaths Attributable to Obesity: Making Sense of the Numbers

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Deaths attributable to Obesity

- Obesity 300,000 deaths

- What does "attributable" mean?

  - Contributing factor?

  - Principal factor?

  - Only factor?

Deaths attributable to Obesity

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- What does "attributable" mean?

  - *Contributing factor*

  - Principal factor?

  - Only factor?

Attributable Deaths

- Obesity   300,000
- Smoking   400,000
- Alcohol   100,000

Attributable Deaths

1. Smoking   400,000

2. Obesity   300,000

3. Alcohol   100,000

?

Attributable Deaths

1. Smoking   400,000

2. Obesity   300,000

3. Alcohol   100,000

    Total   800,000

?

Attributable Deaths

1. Smoking   400,000

2. Obesity   300,000

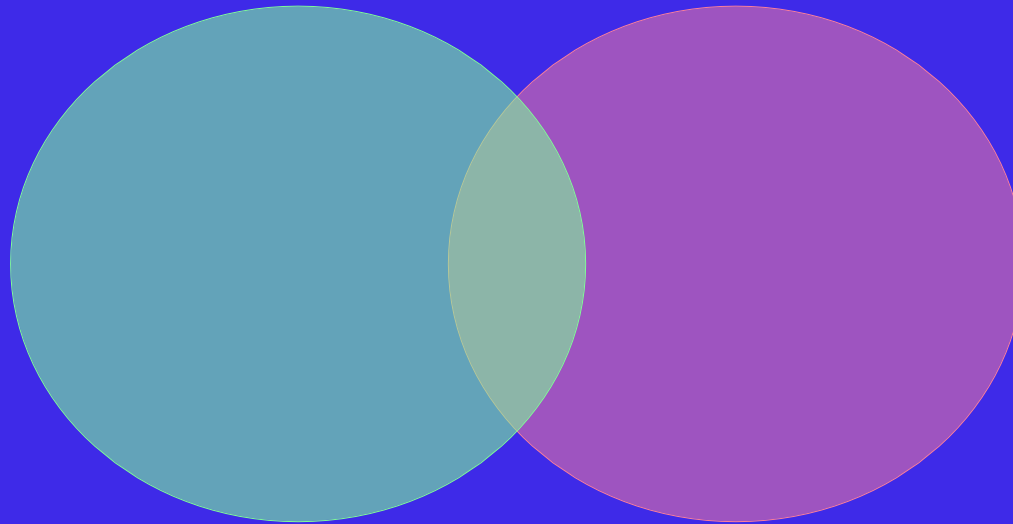3. Alcohol   100,000

_____

Total   800,000

?

Are the categories mutually exclusive?

Multiple Risk Factors

- It is difficult to control for all confounding factors when calculating PAFs

- Detail in the mortality data is often lacking to appropriately apply the PAFs
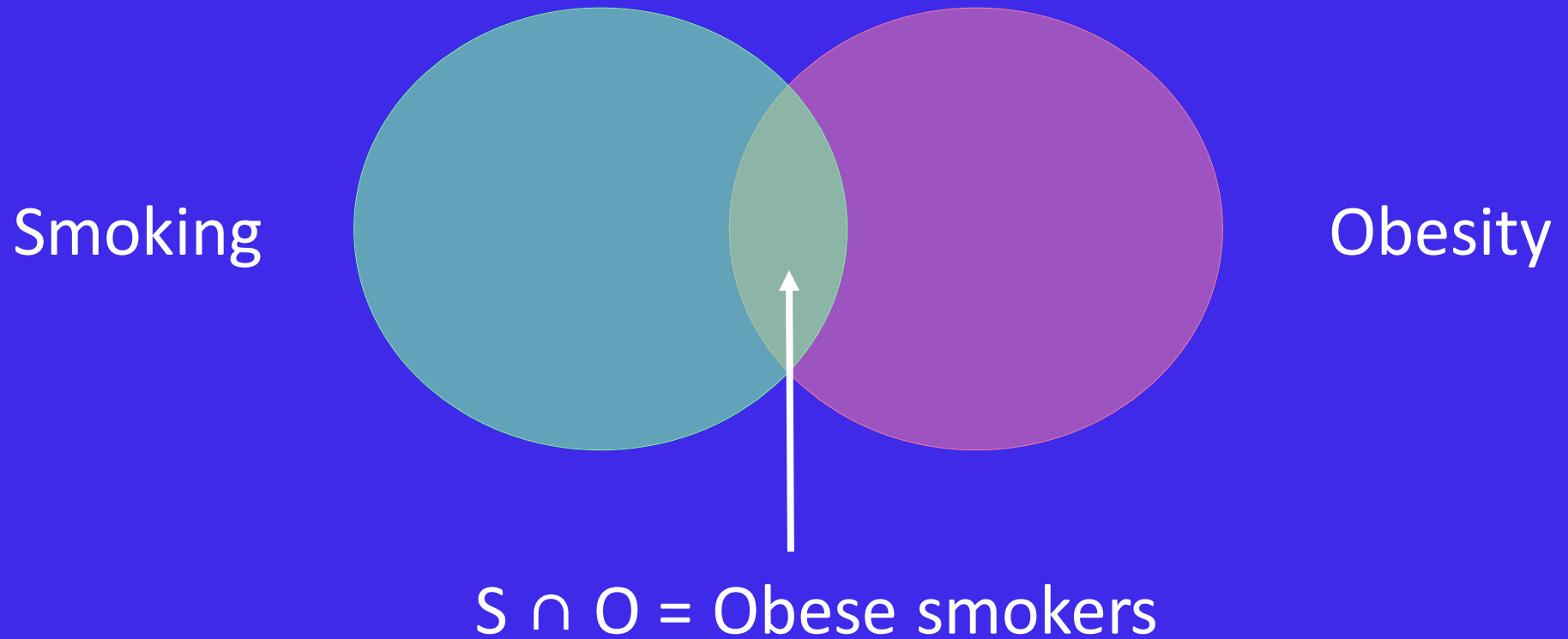
- Should these categories even be mutually exclusive?

Multiple Risk Factors

Smoking

Obesity

Multiple Risk Factors

Smoking

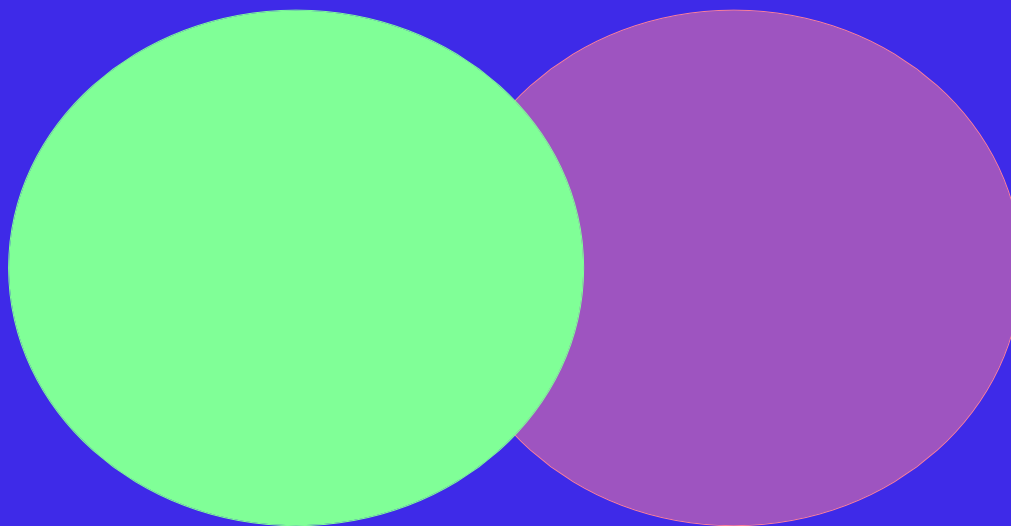Obesity

S ∩ O = Obese smokers

Multiple Risk Factors

- What do we do with the obese smokers?

- Is it appropriate to choose a single risk factor over another?

- If so, which should be chosen?

  - The one most likely to cause death?

  - The one consistent with the underlying cause of death?
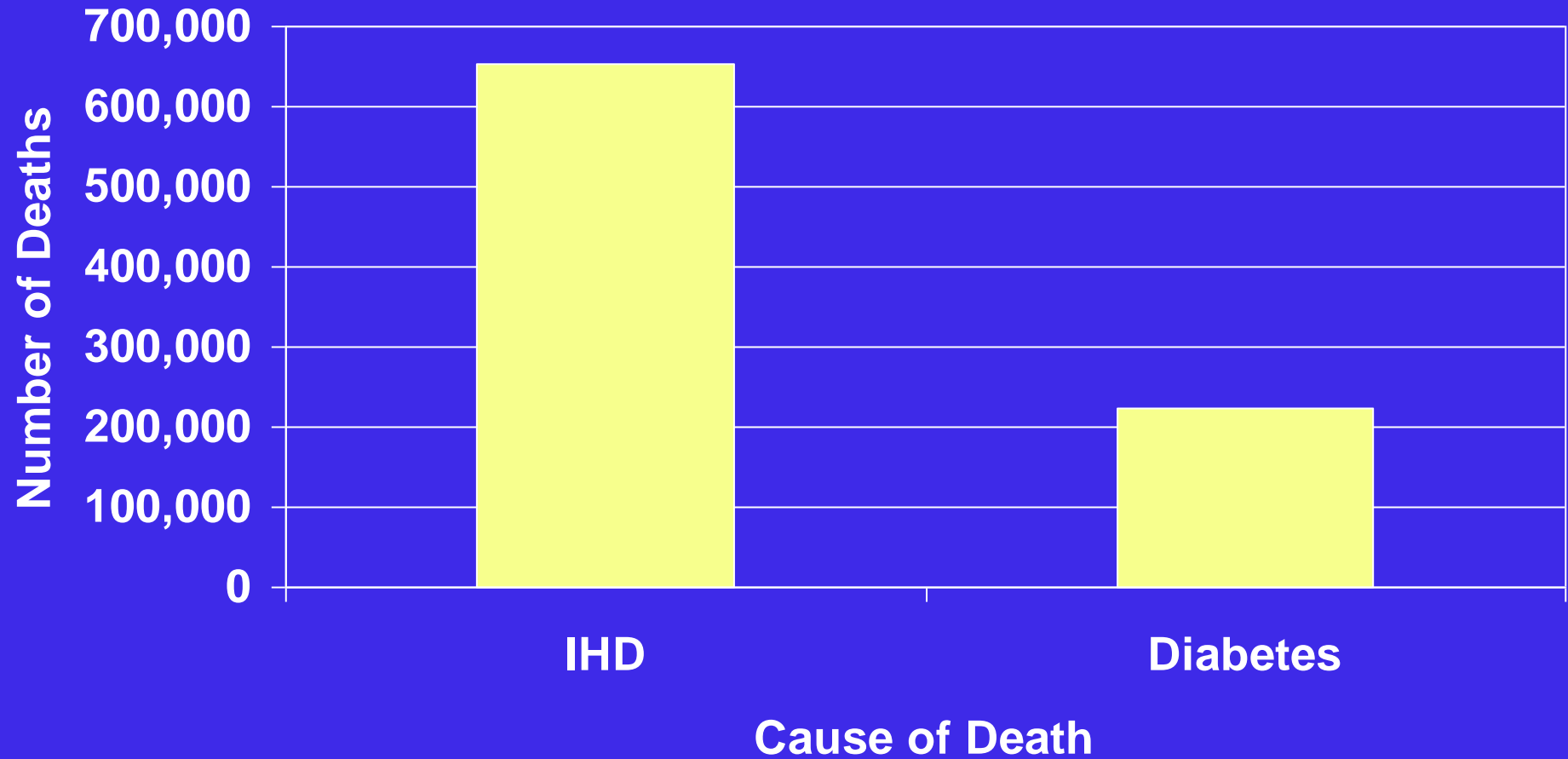
Multiple Risk Factors

Smoking

Obesity

Is There a Better Way
To Approach This?
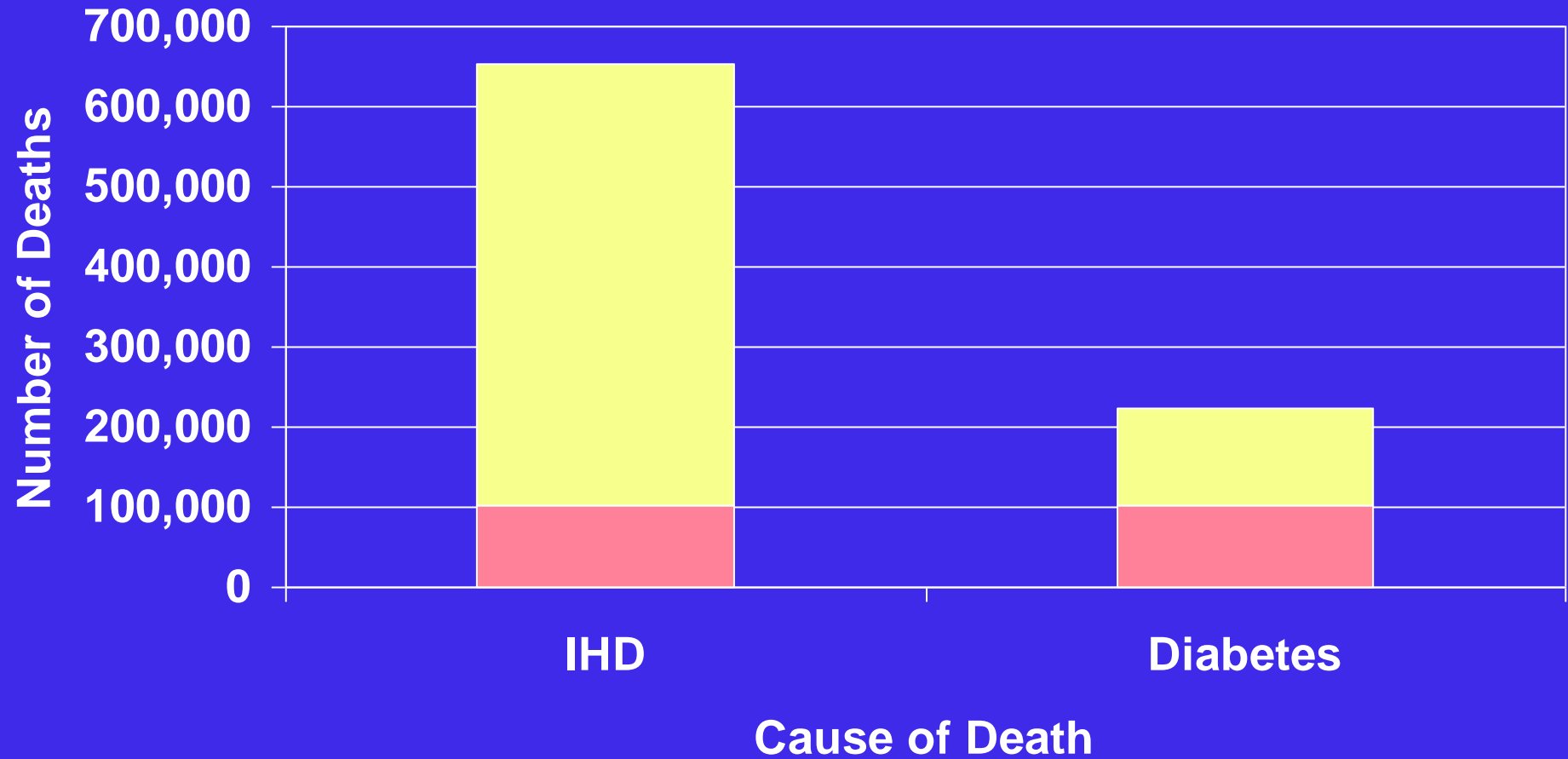
Multiple Causes of Death

- It is common to have more than one injury or disease reported on the death certificate.

- Multiple cause counts measure any mention of the specified condition.

- Diabetes and Ischemic heart disease

Number of Deaths with mention of IHD and Diabetes

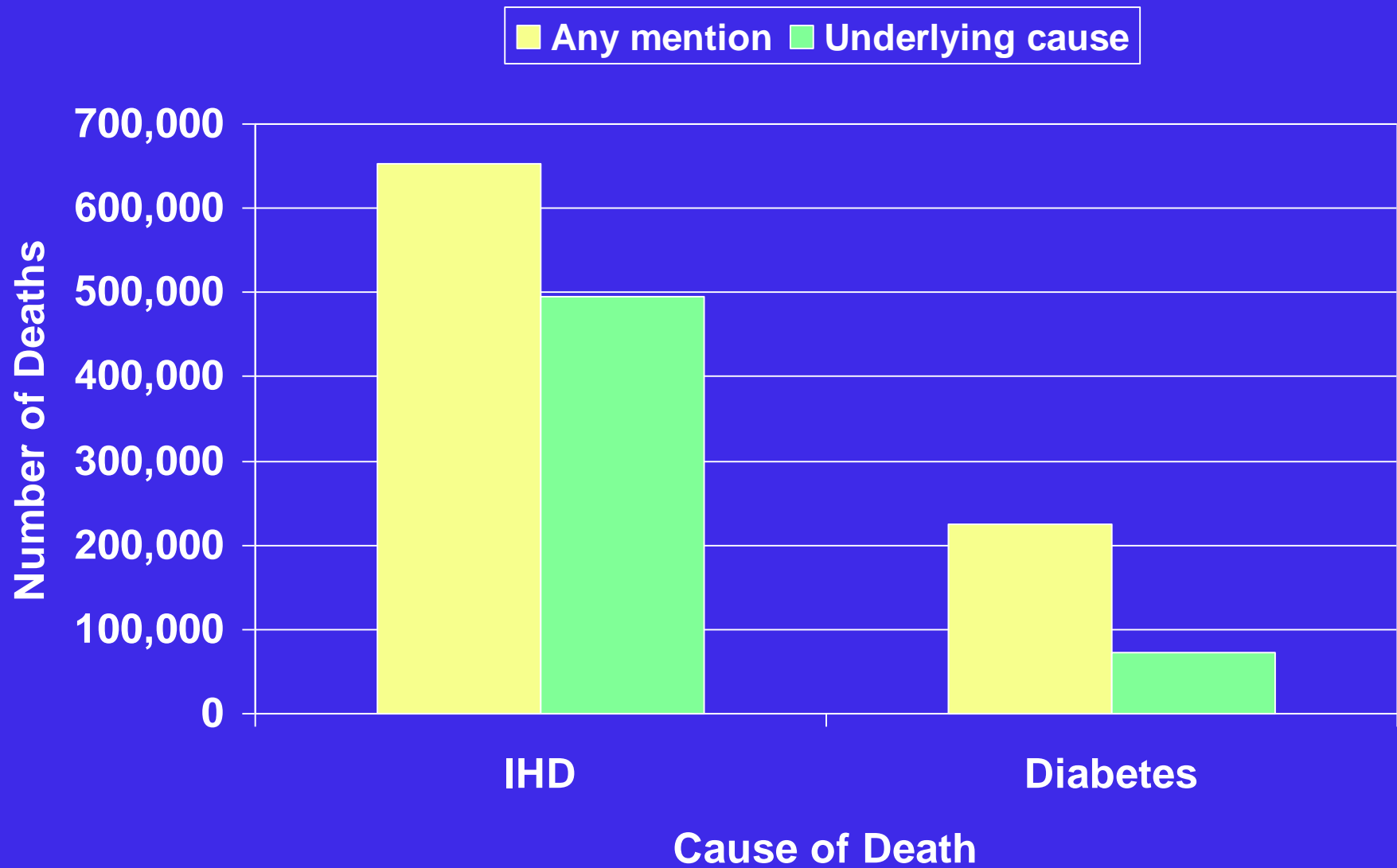Source: National Vital Statistics System, 2002

Number of Deaths with mention of IHD and Diabetes

Source: National Vital Statistics System, 2002
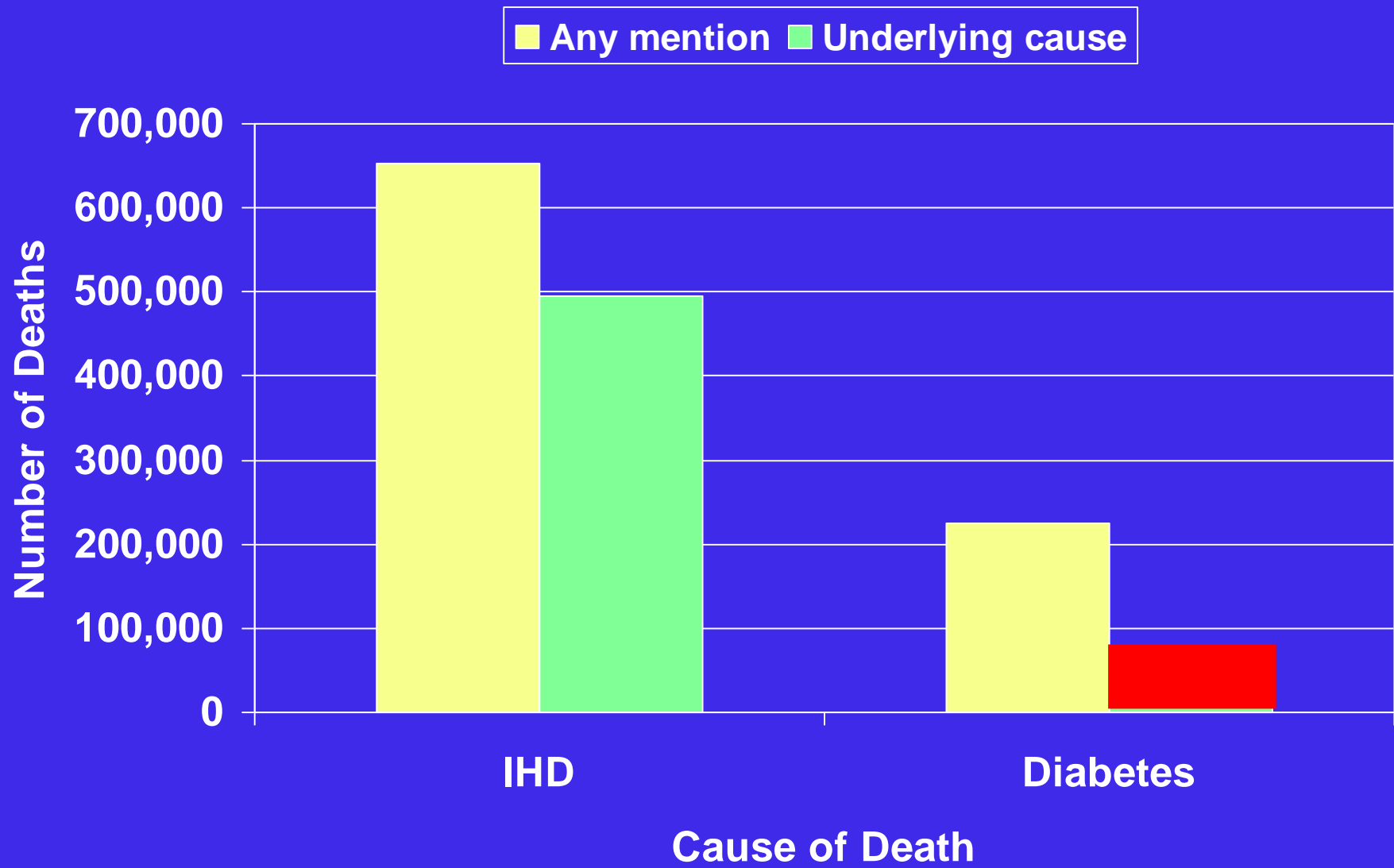
Underlying vs. Multiple Causes of Death

- Choosing a single underlying cause of death
  - The sequence of diseases or injuries leading to death reported on the death certificate
  - Set of standardized rules
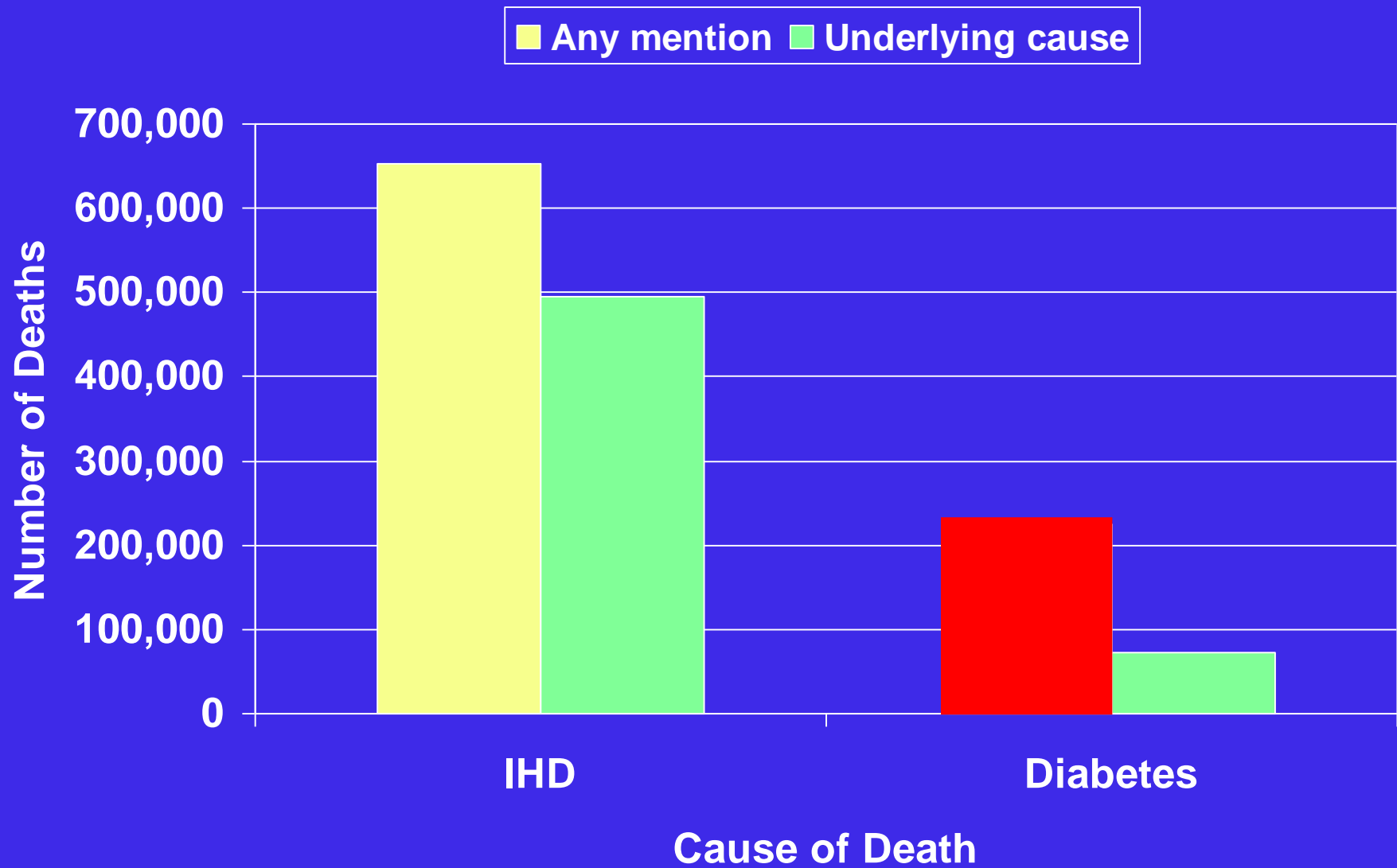- Facilitates comparisons between causes of death

Number of Deaths (y-axis)

- 700,000
- 600,000
- 500,000
- 400,000
- 300,000
- 200,000
- 100,000
- 0

Legend: ■ Any mention ■ Underlying cause

Cause of Death (x-axis): IHD, Diabetes

Source: National Vital Statistics System, 2002

Underlying vs. Multiple Causes of Death

- Underlying cause is not necessarily the best strategy for showing the overall burden of disease or injury for any particular cause of death

Source: National Vital Statistics System, 2002

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Attributable Deaths

- Obesity   300,000

- Smoking   400,000

- Alcohol   100,000

Avoid

- Quantitative comparisons

- Ranking attributable deaths

- Adding attributable deaths together

Focus should be on:

- Are the number of attributable deaths increasing or decreasing?

- What can we do to reduce the number of attributable deaths?