

# Complex Care

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# Plan

1. Drug issues in elderly
2. A case
3. Palliative care
4. Summary

# Some facts

- Over 65 are 18% of population
- They take 50% of prescribed medicines
- 66% M/ 85% F on at least one drug
- 89% M/ 94% F if OTC medicines added
- 51% of over 65 on over 4 drugs
- Mean no. of 4.3 prescribed pills
- 10% on over 10 medications per week

# Drugs and Elderly

- Polypharmacy
- Drug interactions
- Compliance and concordance
- Side effects---”four I’s”
- OTC medications
- Prescribing cascade

# Drug Issues

- Pharmacokinetics
  1. Absorption
  2. Distribution and carriage
  3. Metabolism
  4. Excretion
- Pharmacodynamics

# Drug Interactions

- Pharmacodynamic---receptor issues, enzyme issues---predictable---occur in most patients
- Pharmacokinetic---less predictable, vary from person to person
- Elderly at increased risk—physiological, polypharmacy

# Drug interactions

- 10% of patients on contraindicated drugs
- 35% of patients able to have 1 or more drugs discontinued
- Risk rises with drug numbers
- 50% potential in those on 4 or more pills

# Adverse Drug Reactions

- 30% of those on 4 or more medications
- Serious in 7% hospital admissions
- Fatal in 0.4 %
- Commoner in elderly , more tablets, inappropriate medicines
- 100,000 fatalities in 2001 in USA
- 60% felt to be preventable
- 10% of hospital admissions

# Polypharmacy. What is it?

- More than one drug
- More than two drugs
- More than four drugs
- More medication than clinically justified

# Typical OP experience

“you know – 2 red ones, a blue one and a little one”

“don’t you know what they are?”

“but I only take the white one on a Saturday-if I feel like it”





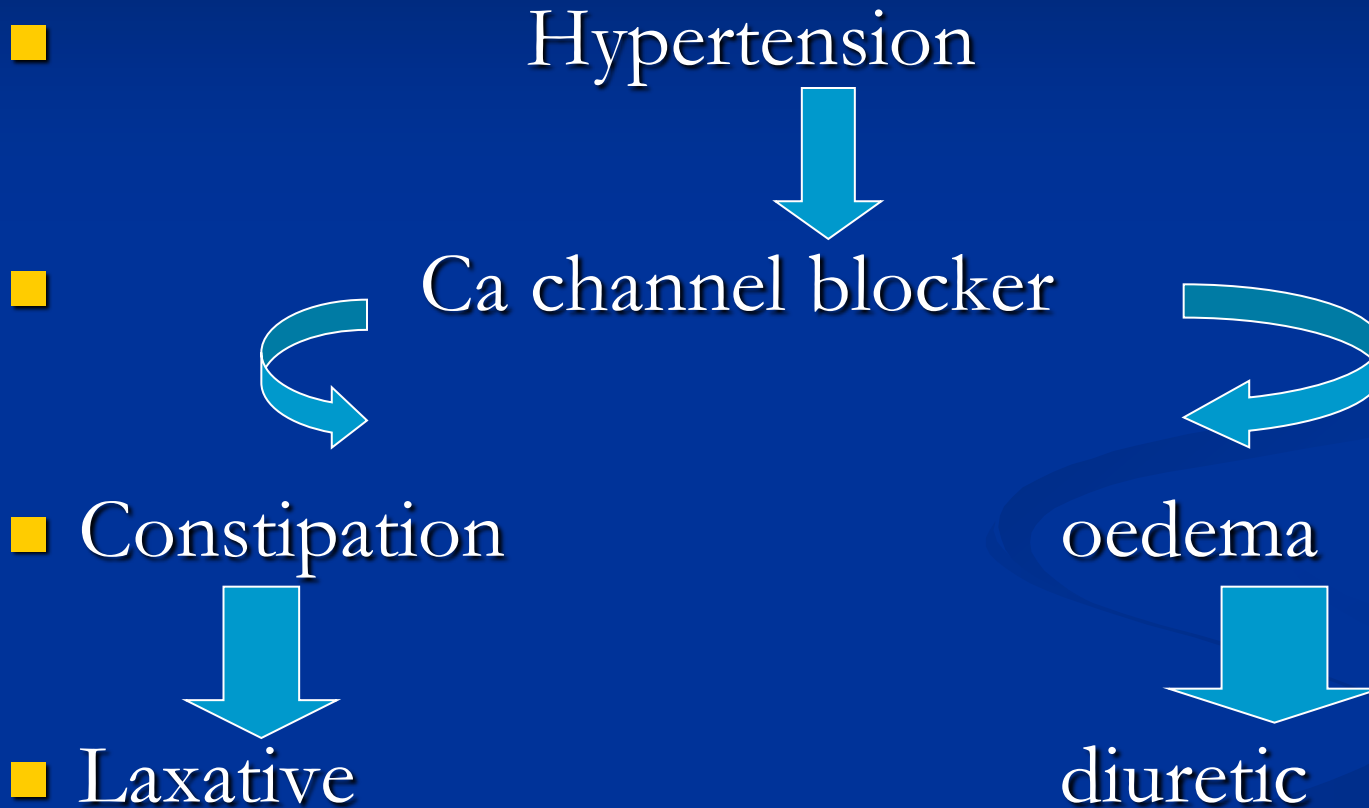
- “they’re here in this carrier bag”
- “let me pour them out for you”
- “Oh no the bottle has leaked”
- “no idea”
- “not sure what they are for”

# Why does it happen

- Over the counter medication
- Complex regimen
- Sensory problems
- Living alone
- Cognitive issues
- Multiple sources-doctors, chemists



# Prescribing cascade



# General rules

- Diagnosis ?? Drug effective ??
- Start low go slow
- Familiar drugs
- Tailor side effects
- Avoid certain classes---anticholinergic
- Regular review
- Education and administration



# Mrs Brown

- 89 year old
- In care home for 4 years
- Parkinsons disease for 12 years
- Progressive dementia for 4 years
- General decline over last 6 months
- Reduced oral intake, losing weight
- Medication issues
- Caring and involved husband and sons

# medication

- Aspirin
- Simvastatin
- Sinemet plus 5 per day
- Selegeline 10mg
- Amantadine 100 mg
- Ropinirole 8mg
- Bendrofluazide
- Calcichew
- fosamax

# issues

- Medications—symptoms and management
- Diagnosis
- Capacity and competence
- Diet and nutrition
- Level of care
- Family expectations
- How far to take

# outcome

- Endoscopy
- Intervention in hospital
- Discharged back to home
- Lived 3 years
- Negotiated withdrawal plan
- Died in care home

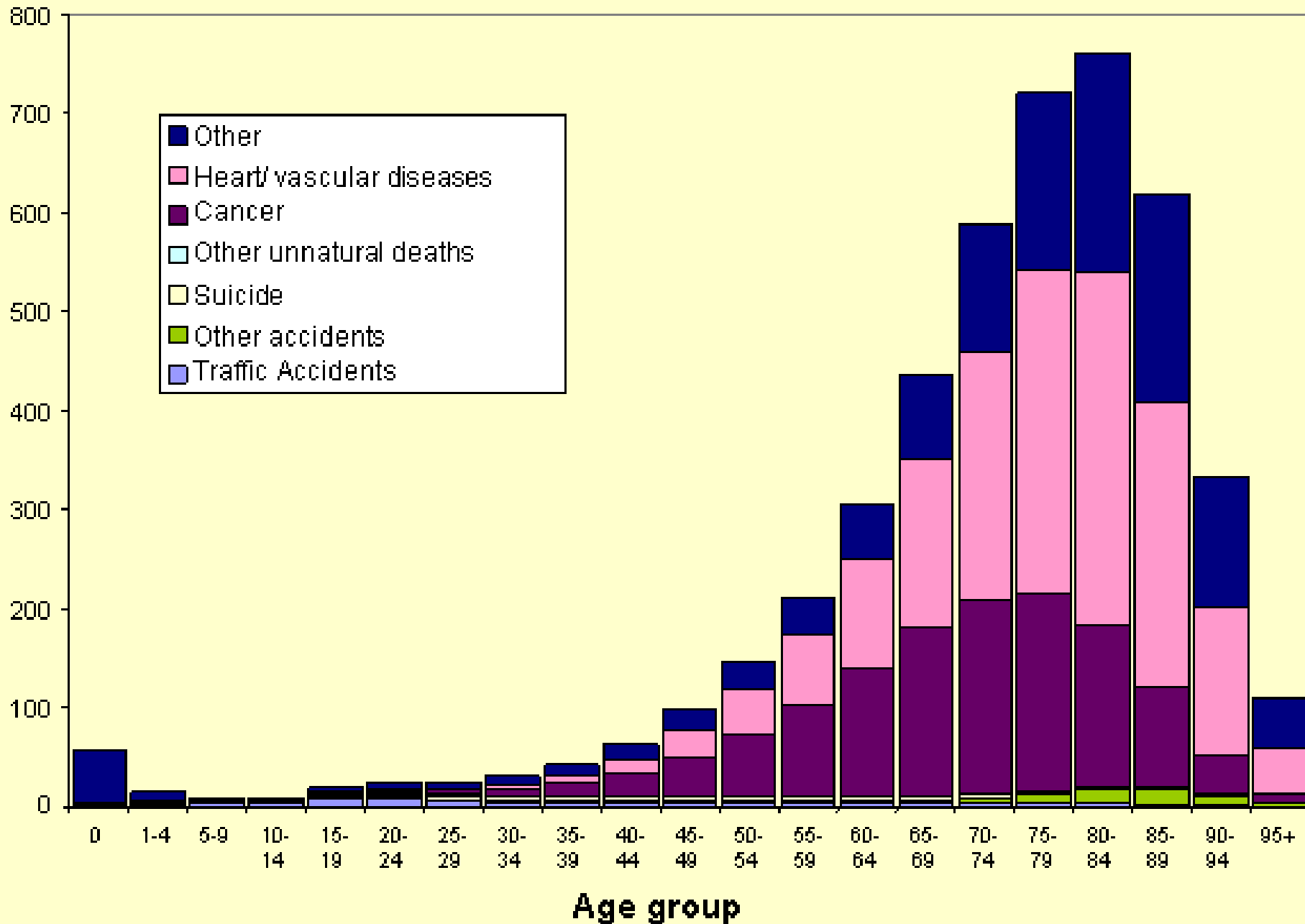
# Palliative Care

- “the active total care of patients whose disease is not responsive to curative treatment. Control of pain, of other symptoms and of psychological, social and spiritual problems is paramount”
- Best quality of life for patients and their carers

# principles

- Affirms life- dying as a normal process
- Neither hastens nor postpones death
- Offers system to maintain independence
- Offers systems to support
- Provides relief from physical symptoms
- Psychological support

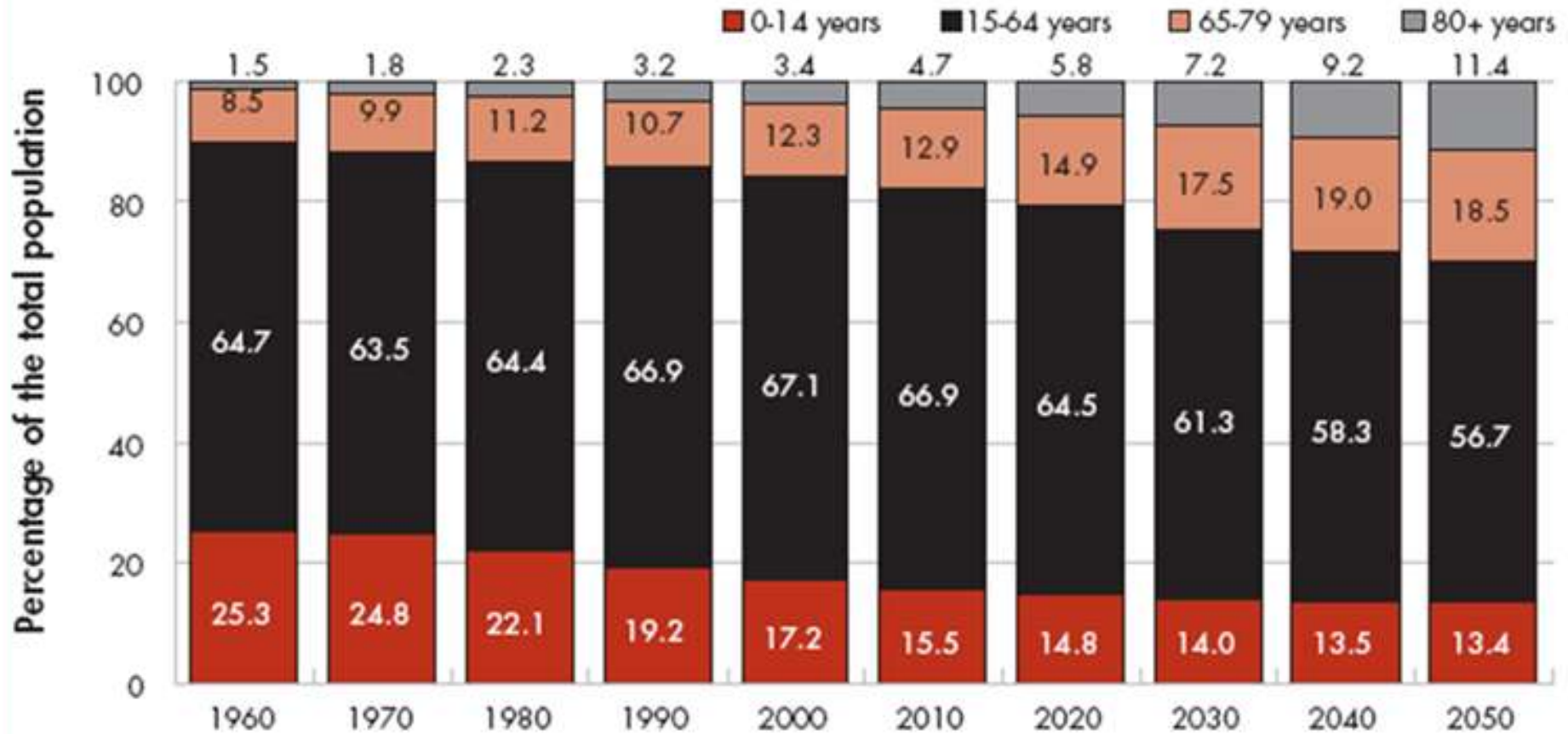
# Deaths



# Ageing

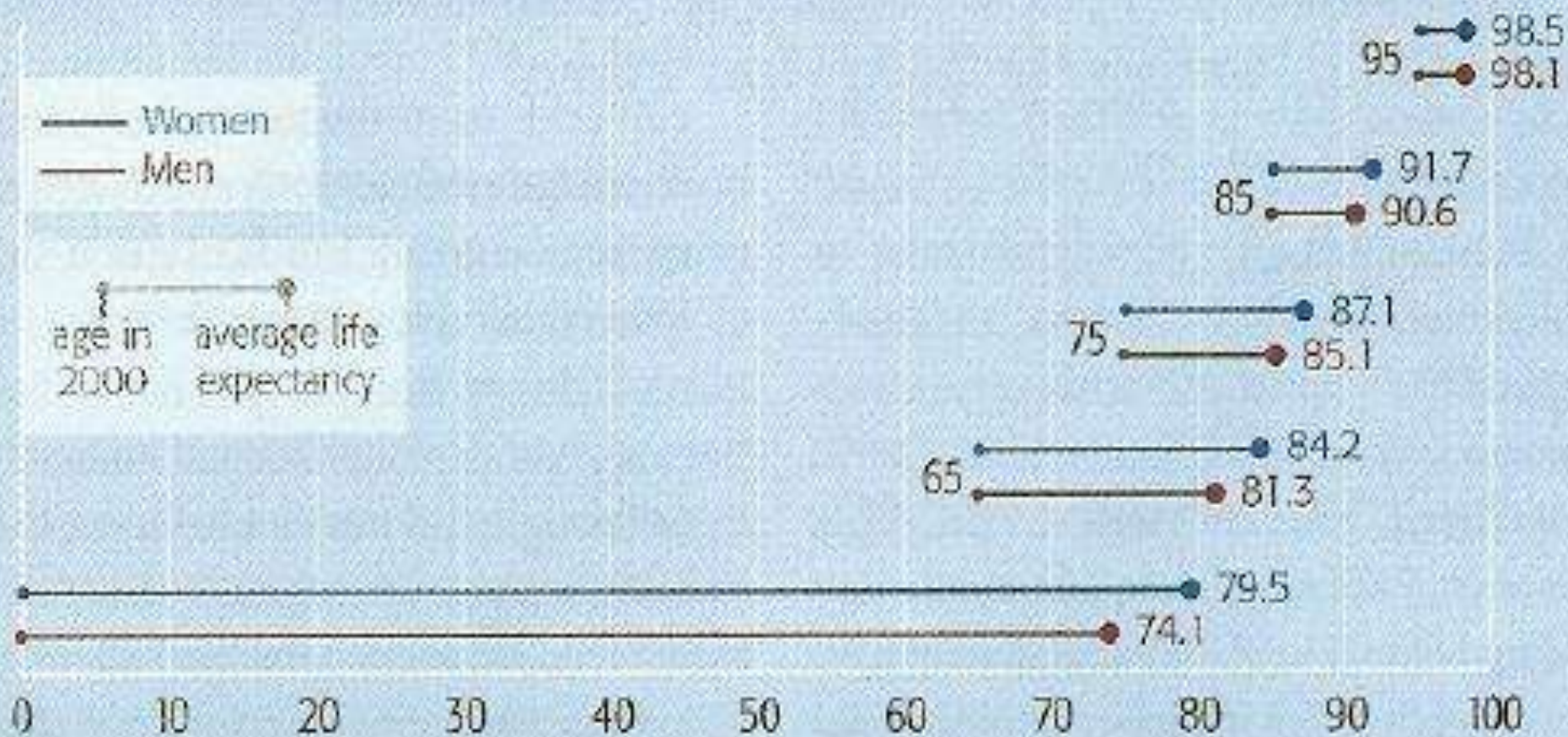
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Population structure by major age groups, EU-25; 1960, 1970, ..., 2050

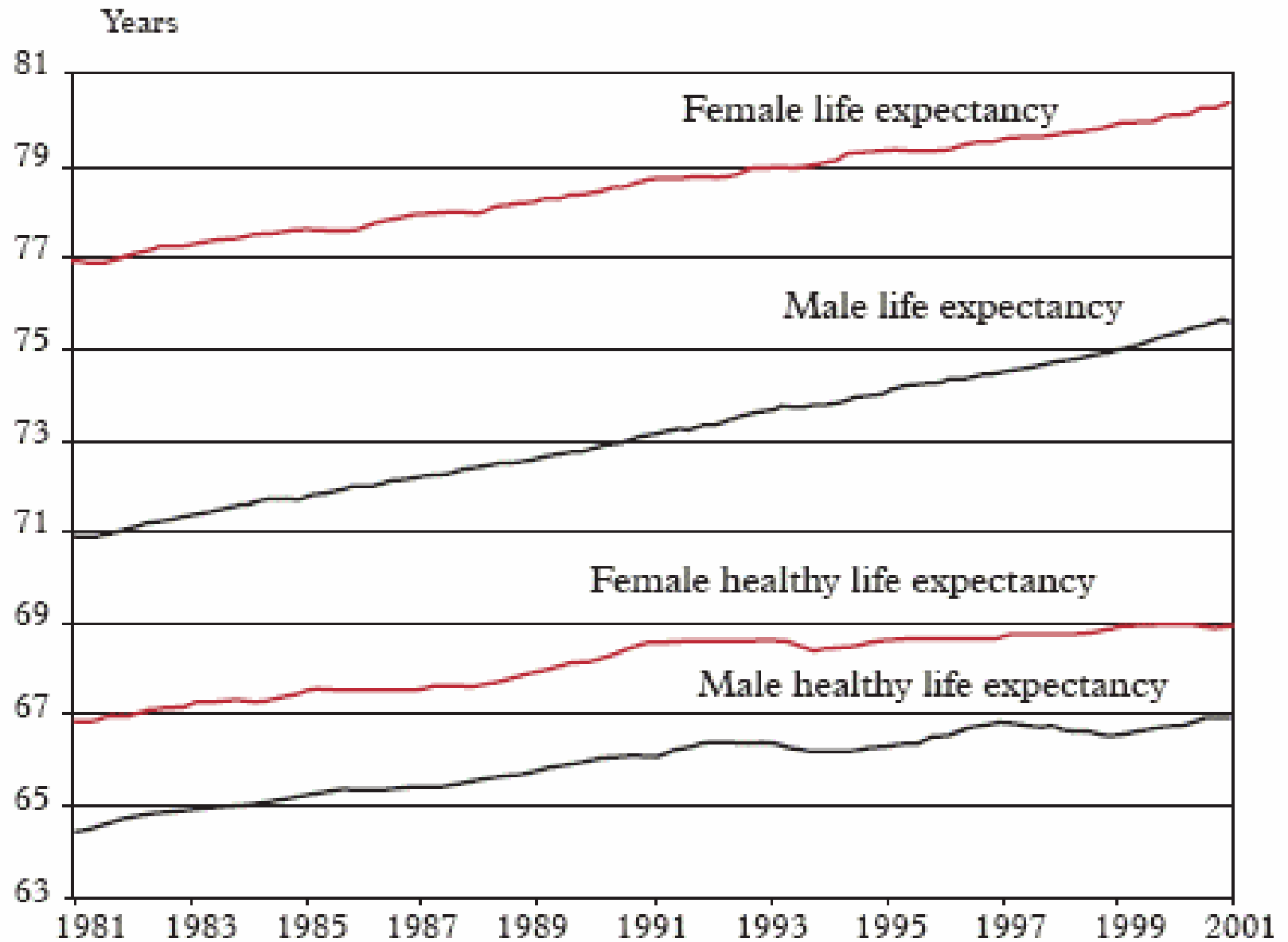


Sources: Eurostat – Demographic statistics (1960-2000) and 2004-based Eurostat population projections, trend scenario, baseline variant (2010-2050).

# Life expectancy



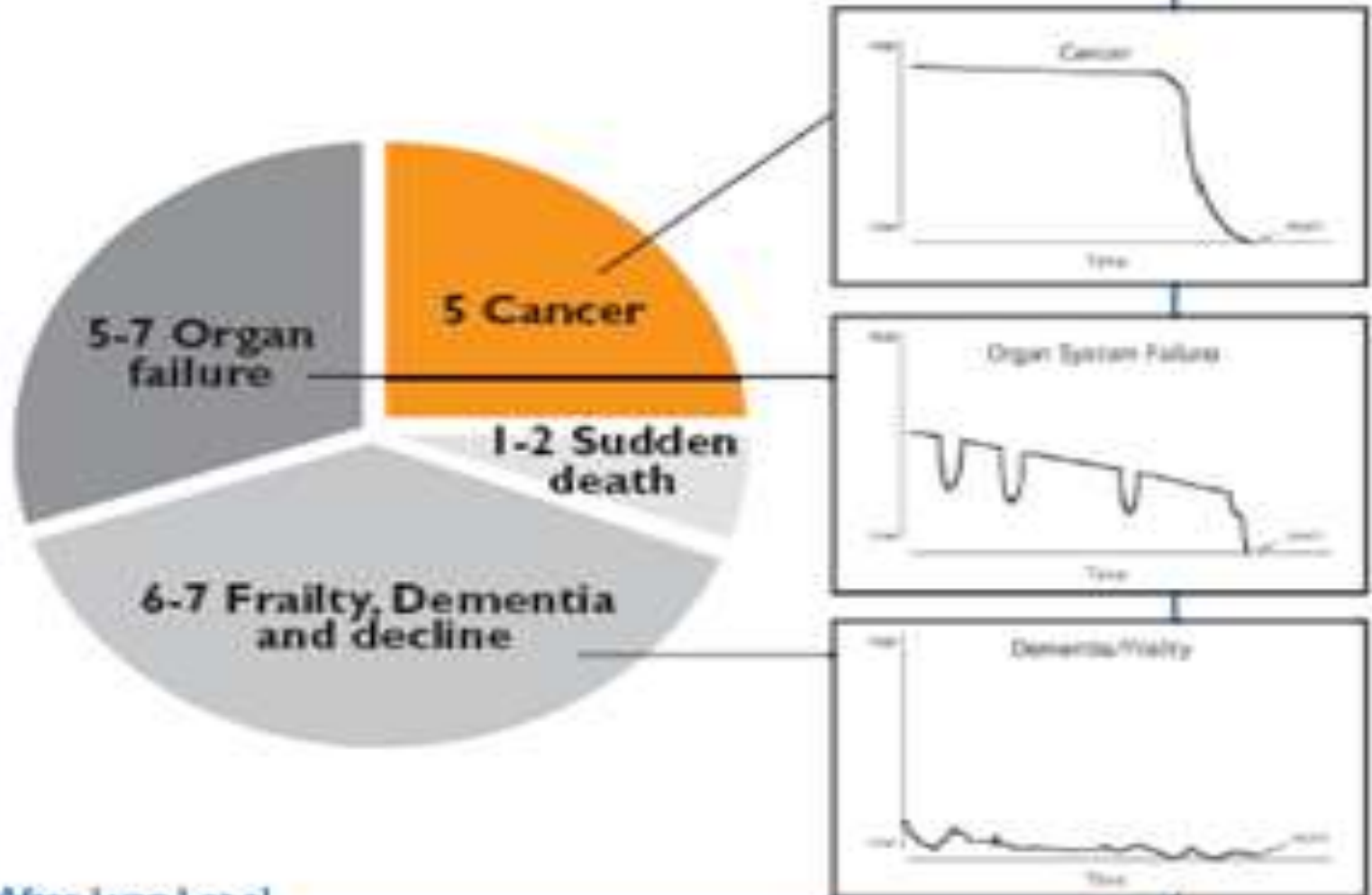
# Ageing



# Patterns in palliative care

Fig 2.

**Three trajectories of illness**  
GP's Workload - About 20 Deaths/GP/yr



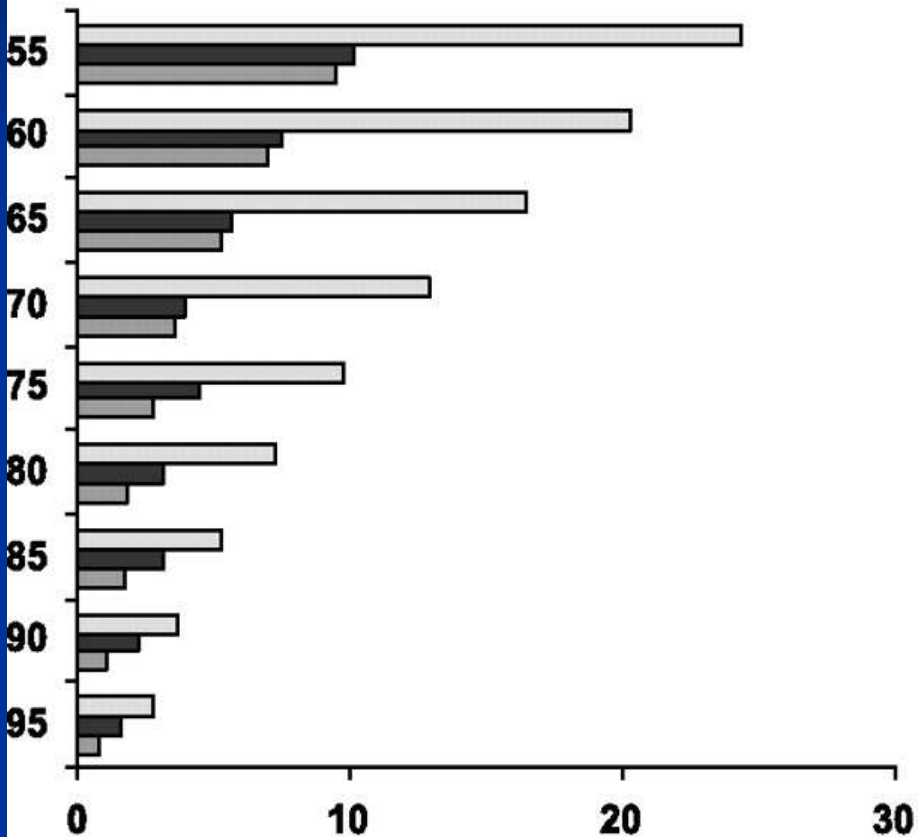
After Lynn, J et al

# Survival Times

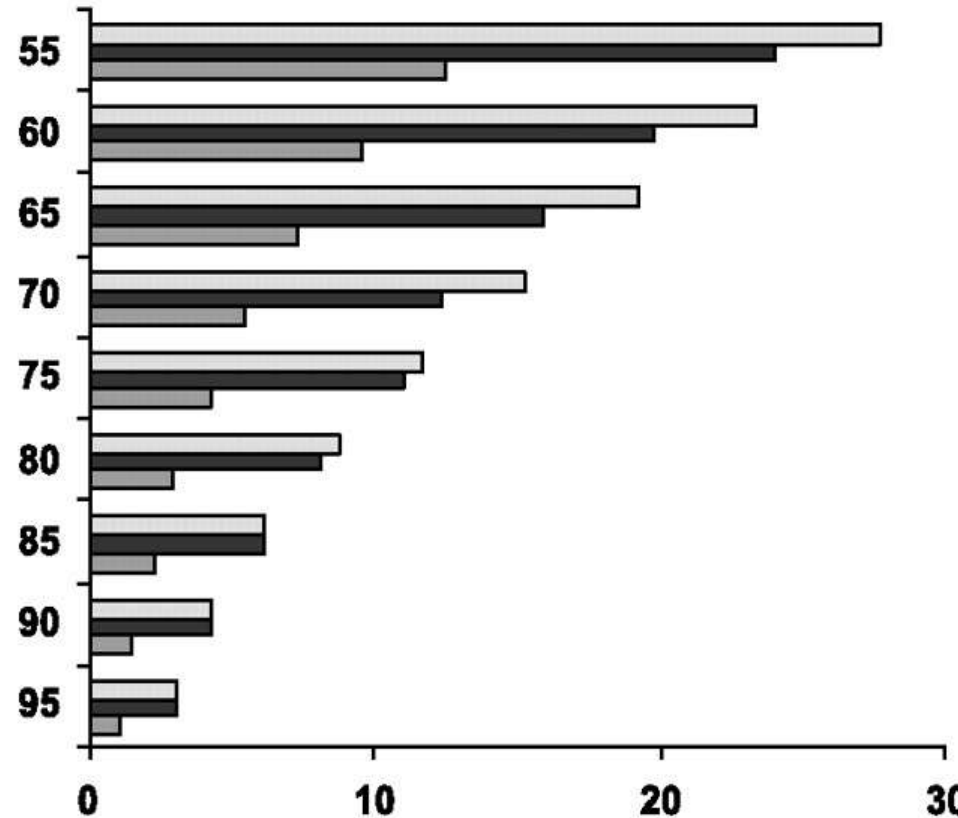
- Alzheimer's 12 / 6 years
- Parkinson's 17 years
- Lewy Body Dementia 5-7 years
- PD plus 5-7 years

# PD survival

## Males



## Females

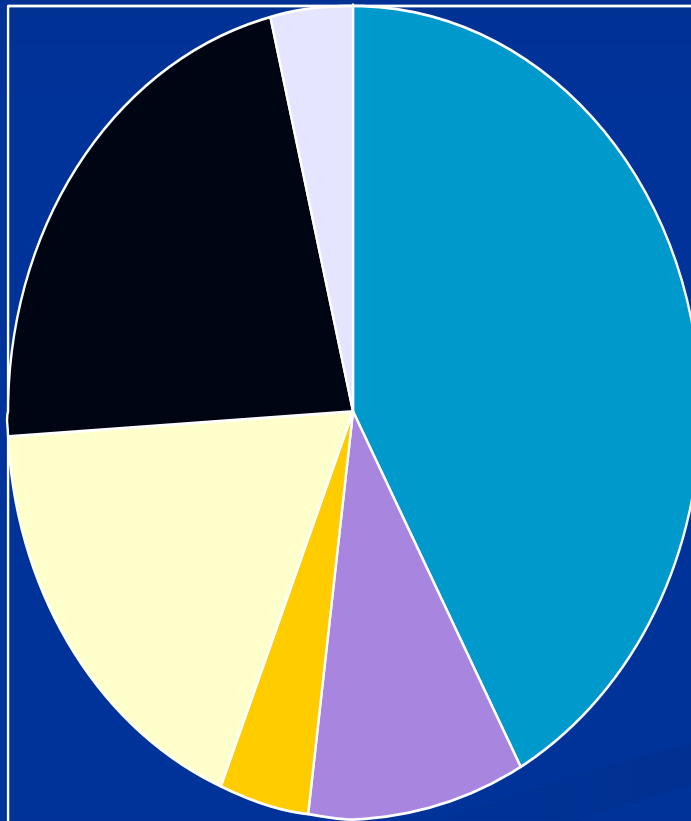


- General population.
- Parkinson's disease dementia free
- Parkinson's disease demented

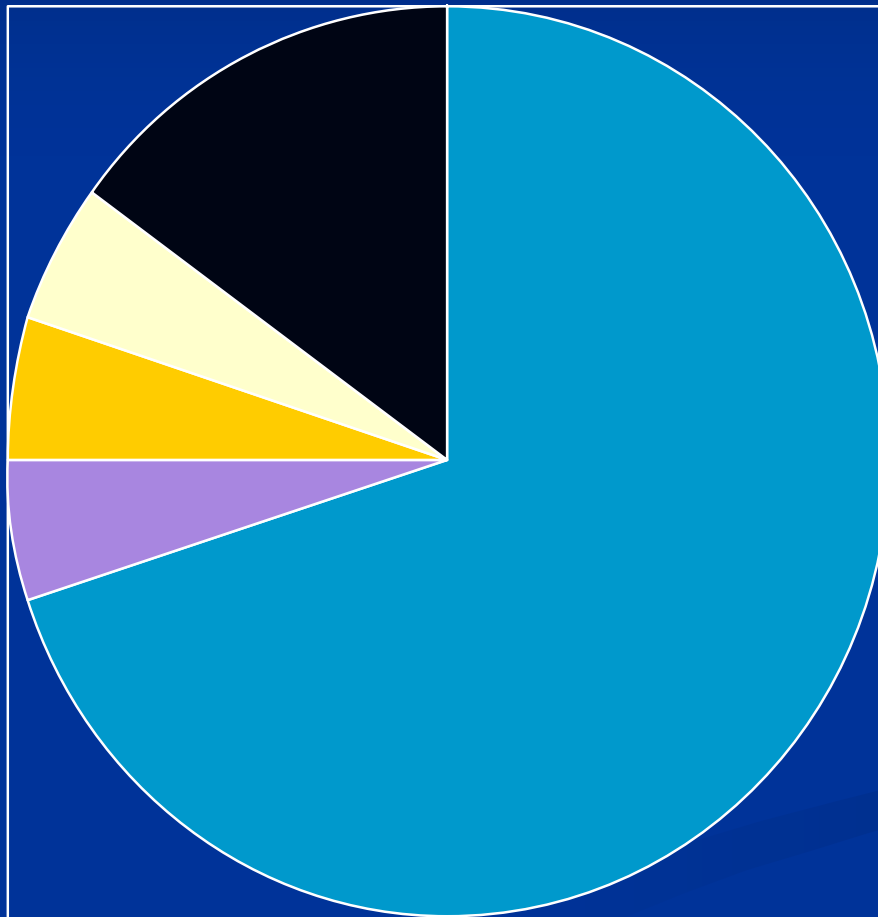
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# Place of death

place of death - all causes



# Place of death- patients choice



# Summary

- Regular review of drugs---how does the patient benefit
- Changing drugs may precipitate problems
- Planning of end of life care
- What we can do should do and must do
- Every case is different and individual
- It takes time and experience
- Happy to educate—[Simon.Cooper@tst.nhs.uk](mailto:Simon.Cooper@tst.nhs.uk)