The Ageing PWH – Possibilities and Problems

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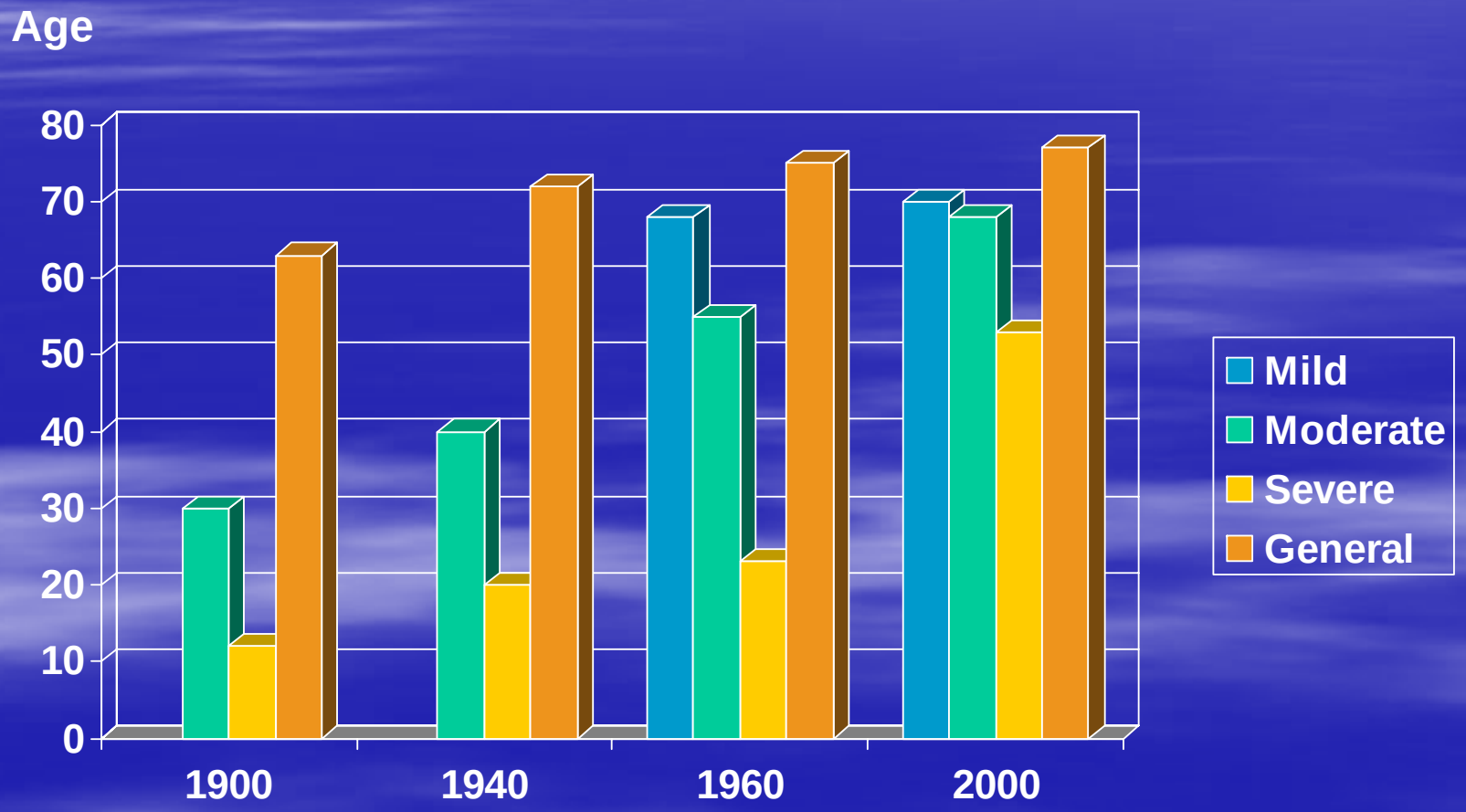
The Future PWH

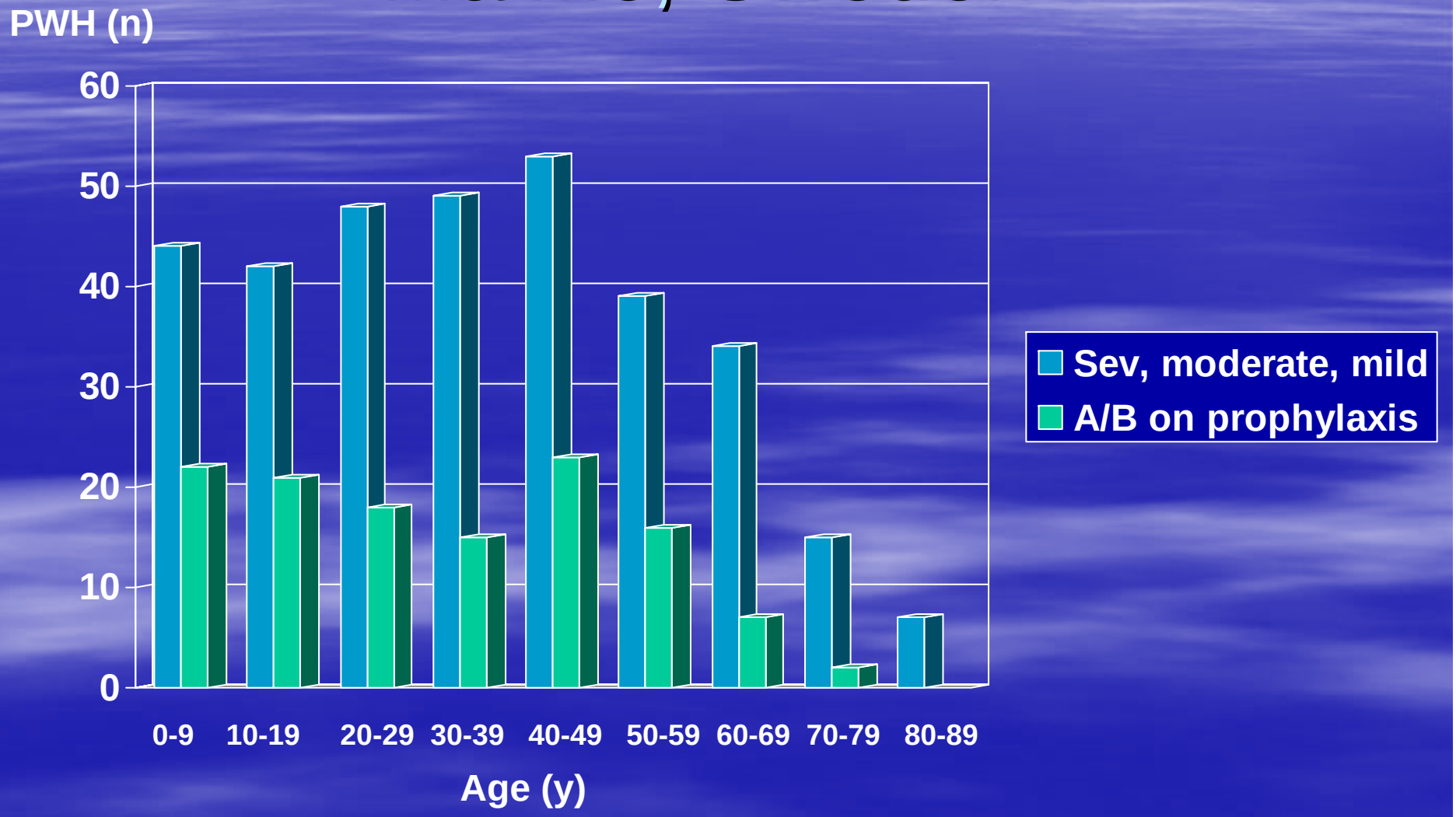
Painting from 1700 century, Kulturen, Lund

Median life span: Swedish PWHs and the general male population, 1900 to 2000



Age distribution of PWH

Malmö, Sweden



Patients on prophylaxis, by age group

	N	%
Total hemophilia A/B (severe, moderate, mild)	333	100%
<40 years	183	65%
≥40 years	148	35%
Hemophilia A/B (severe, moderate) on prophylaxis	124	75%
<40 years	76	61%
≥40 years	48	39%
Hemophilia A/B (severe) on prophylaxis	107	89%*
<40 years	70	65%
≥40 years	37	35%

*93% of non-inhibitor patients.

Prophylaxis

What can we achieve?

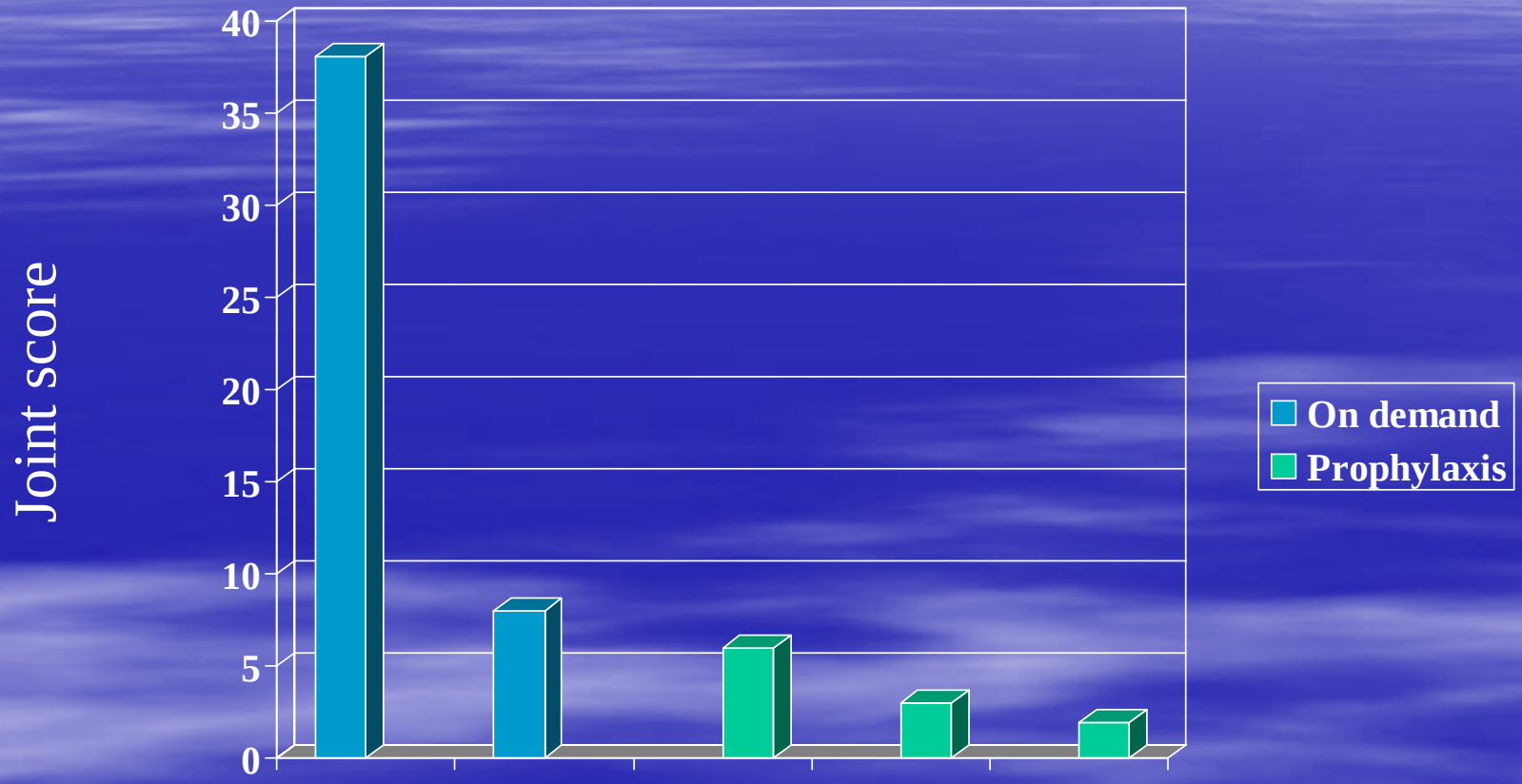
What are the lessons learned?

Prophylaxis (revised definition consensus in London 2002)

- **Primary prophylaxis determined by age**
  - **Long-term continuous treatment started before the age of 2 years and prior to any clinically evident joint bleeding**
- **Primary prophylaxis determined by first bleed**
  - **Long-term continuous treatment started prior to the onset of joint damage (presumptively defined as having had no more than one joint bleed) irrespective of age**
- **Secondary prophylaxis**
  - **Long-term continuous treatment not fulfilling the criteria for primary prophylaxis**

Berntorp et al 2003

Orthopedic joint score by age group in patients with or without prophylaxis



Nilsson et al 1992

Prophylaxis

What can we achieve?

What are the lessons learned?

Treatment Strategies for Severe Haemophilia: On-demand versus prophylaxis

”Norway vs Sweden”

Katarina Steen Carlsson et al 2003, 2004, 2004

Study objectives

- To estimate the differences in ***resource use*** measured in physical quantities
- To estimate the expected ***annual costs*** of the strategies ‘prophylaxis’ and ‘on-demand’ treatment for severe haemophilia A and B
- To evaluate the ***benefits*** of the two alternative treatment strategies using the contingent valuation method

Part I

Differences in treatment characteristics and outcome

Study population

	On-demand (N)	Prophylaxis (N)
Haemophilia A	52	81
Haemophilia B	9	14
Total	61	95
Mean Age* (Std Dev)	35.89 (10.98)	24.14 (11.47)

*31 December 1999

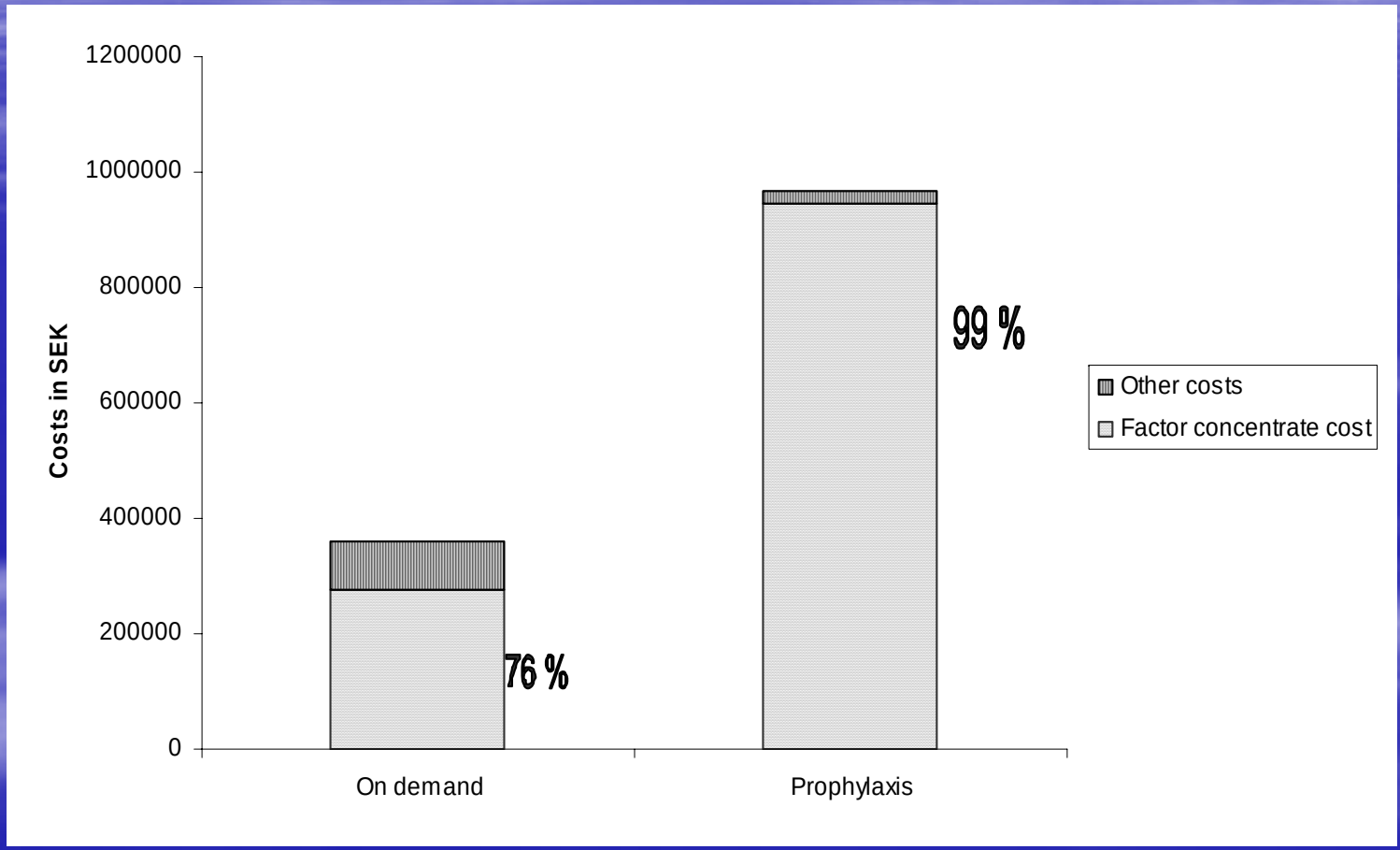
Treatment data 1989-1999

- All haemophilia related treatment costs within the health care sector
  - Factor concentrate consumption
  - Doctors' and nurses' visits
  - Diagnostic procedures
  - Hospitalisations and invasive procedures
- Cost for haemophilia-related resource use outside the health care sector
  - Loss of productive time (incl. relatives)
  - The use of special equipment
  - Adaptation of work place and domicile

Total number of surgical procedures

	On Demand n=61	Prophylaxis n=95
Arthrodeses Prostheses	63	7
Synovectomies	25	2
Miscellaneous minor surgeries incl. tooth extractions	33	23
Port implantations/extractions		16
Total no. of procedures 1989-1999	121	48
Number of procedures divided by group size	1.98	0.51

Total costs:
factor concentrate vs. other costs



Conclusions

- ***Prophylaxis is the more costly strategy*** **due to the large impact on costs from the amount of factor concentrate used**
- **The fact that one strategy is less costly than the other is not sufficient to conclude that it represents a more efficient use of society's resources, unless it can be claimed that it also produces at least the same benefits**
- **Our study indicates that there may be substantial *quality of life differences* between the strategies**

Part II

Evaluation of benefits

Willingness to Pay (WTP)

- People from the general population were asked about their WTP for each treatment strategy
- A pilot study was first performed (n=50)
- Following analysis of the pilot data a full study was performed with participation of 609 respondents

Calculated cost for the two regimens in Sweden

- Annual average cost for a patient treated:
  - on-demand: EUR 48 000
  - prophylaxis: EUR 144 000
- Patients with severe haemophilia:
  - N=280
- Annual cost per tax payer:
  - On-demand EUR 2.0
  - Prophylaxis EUR 6.5

WTP questions

- Would you pay “X” SEK annually from your income so that patients with severe haemophilia would obtain prophylactic/on demand treatment?
  - Yes/No
- How sure are you that you consider the prophylactic/on demand treatment to be worth “X” SEK?
  - Absolutely certain/Rather certain

Results (N=609)

- Estimated mean WTP was EUR 36 (95% CI 28-43) for on-demand treatment
- Estimated mean WTP was EUR 59 (95% CI 51-68) for prophylactic treatment
- WTP was 18 and 9 times greater for on demand and prophylaxis, respectively, than the annual cost per tax payer

Interpretation of results

- **There was support for both treatments (compared to no treatment), as mean WTP exceeded costs of treatment**
- ***Firm support for prophylactic treatment*** **since the additional cost of prophylactic treatment (EUR 4.5) was covered more than fivefold by the additional WTP**

On-demand vs. Prophylactic treatment in Norway and Sweden Conclusions: Parts I and II

- **Strong support for prophylaxis**
  - Less resource use (surgery, loss of production etc.) indicates better quality of life. This finding has been corroborated by other studies
  - Willingness-to-pay exceeds costs for both treatments
- ***We foresee an ageing population of PWH who are quite healthy and active and comparable to the general population in most respects.***

The Ageing PWH…

Possibilities

- Life expectancy similar to the general male general
- Consumption of health care not substantially increased (CFCs excluded) compared to the general population
- A productive person in society
- A consumer, making contributions to the economy and tax base
- Active in his leisure time

Impact on hemophilia care

- A longer and healthier life increases the demand for hemophilia care
  - More ambitious treatment
    - Start prophylaxis earlier
    - Never stop prophylaxis
    - Implement prophylaxis in patients with inhibitors
- Costs will increase for health care
  - But not for society
  - Humanitarian aspects

Problems related to general health care

- Normal age-related diseases will appear
  - Cardiovascular
  - Cancer
  - Mental detoriation/dementia
- Treating these diseases will be a heightened challenge because of the bleeding disorder
  - Antihemostatic treatment in connection with e.g. coronary events
  - Cancer treatment with irradiation, surgery, cytostatic drugs

Does the ageing PWH get the "usual" illnessess?

- The clotting defect may be protective against cardiovascular disease
  - 80 % reduction in fatal ischemic heart disease associated with hemophilia A or B (Triemstra et al 1995)
  - 36 % decrease in mortality from ischemic heart disease for carriers of hemophilia (Sra´mek et al 2003)
  - Anticoagulants are used to reduce ischemic events
  - Increased coagulability is a risk factor for cardiovascular disease

Priorities and ethical issues

- Should the presence of hemophilia *per se* result in a lower ranking on the priority scale for treatment of concomitant diseases?
- Do we continue the very expensive hemophilia therapy in the very old PWH who is beyond treatment for a serious illness, or who has a dementia?

Overall conclusions

- Modern hemophilia treatment can, in many respects, ”equalize” the health status of the PWH to that of the general population
- Caring for the ageing PWH presents new challenges
- The comprehensive care center and its staff must be equipped with the ability to recognize and manage diseases common to older people

Thank you for your attention!