Family Practice #401

AN OVERVIEW OF GERIATRIC HEALTH CARE

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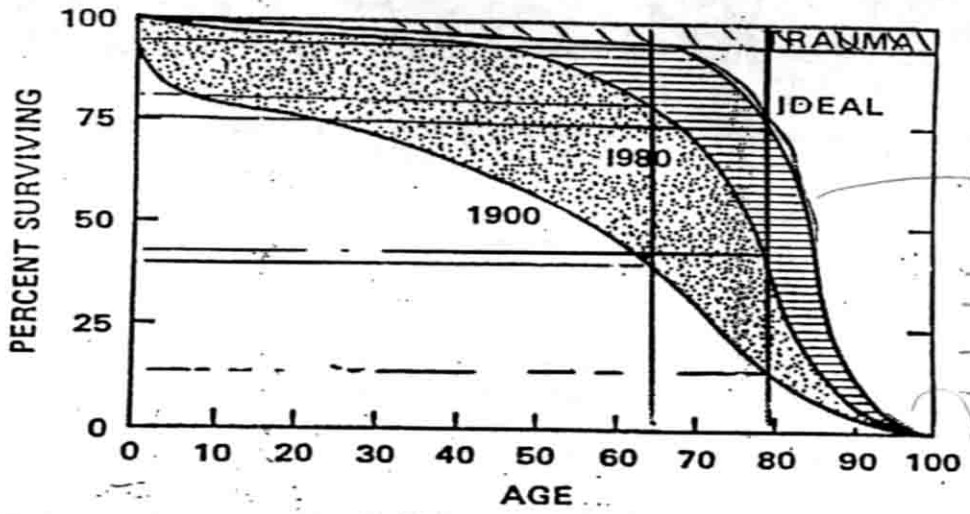
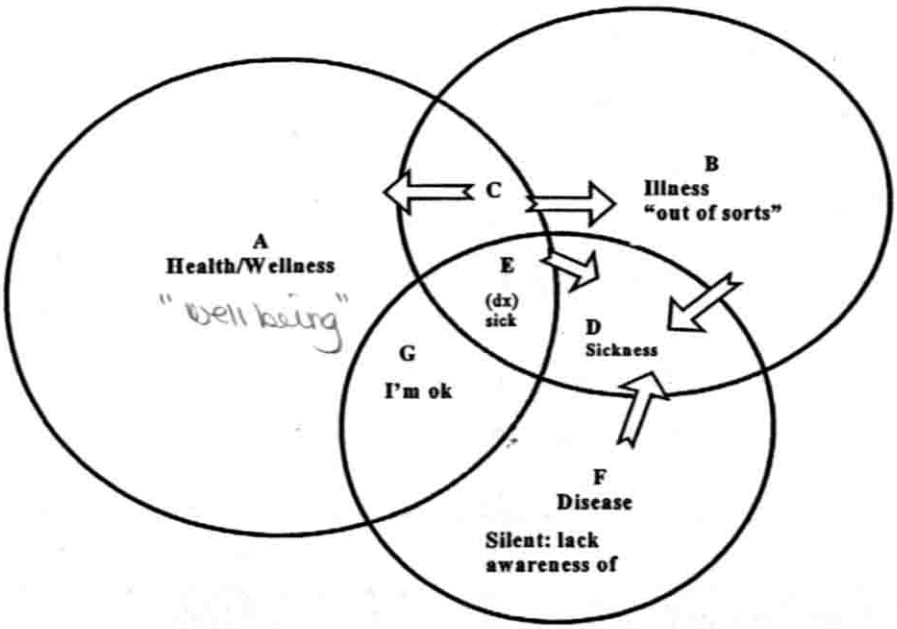


FIG. 2 "The rectangularization of the survival curve." (Fries, 1980)

more people live closer to 100
- sanitation
- immunization
- nutrition
↓ maternal mortality
↔ doesn't change.

health ration related to diff b/w the richest + poorest
- ↑ USA ↓ health than Canada.

>65 138♀ 100♂
>85 2♀ 1♂



Health, illness and disease may overlap, but they are uniquely different facets of experience.

Labonte, 1993

A Summary of Selected Anatomic and Physiologic Changes with Aging, Health Adults

System Affected	Change Noted	Age Span (years)
Height	Average loss of 2 inches	40 to 80
Weight		
Men	Peaks in mid 50s, then declines	
Women	Peaks in mid 60s, then declines	
Total body water		
Men	Declines from 60% to 54%	20to 80
Women	Declines from 54% to 46%	20 to 80
Muscle mass	30% decrease	30 to 70
Taste buds	70% decrease in number	30 to 70
Cardiac reserve	Decreases from 4.6 to 3.3 Times resting cardiac output	25 to 70
Maximum heart rate	195 to 155 beats/min	25 to 70
Lung vital capacity	17% decrease	30 to 70
Renal perfusion	Reduced by 50%	30 to 80
Prostate gland (men)	Doubles in size	20 to 80
Cerebral blood flow	Reduced by 20%	30 to 70
Bone mineral content	Reduced by 25% to 30% in women, 10% to 15% in men	40 to 80
Brain weight	Reduced by 7%	20 to 80
Amount of light reaching the retina	Diminished by 70% don't have same reserves	20 to 65
Plasma glucocorticoid levels	No change	30 to 70

Examples of Reduced Homeostatic Responses Common in Older Persons

Responses Commonly Reduced in Older Persons	Clinical Implications
Baroreceptor responsiveness	Increased susceptibility to postural hypertension
Thermoregulatory responses	Higher prevalence of hypothermia or hyperthermia
Cardiovascular reserve	Susceptibility to fluid overload
Thirst	Dehydration more common
Dark adaptation	Night driving more dangerous

losses
- retirement
- death of close bros
- children moving away
- friends dying
- disability

1991 Canadian Aging and Independence Study
Perceived Health Status

	Excellent or Good	Fair or Poor
Age 45-64	80%♂ 77%♀	20%♂ 23%♀
Age 80	60%♂ 56%♀	40%♂ 44%♀

↳ veasey impt.

Statistic Canada's 1986 Health and Activity Limitation Survey

- 83% of those 75 to 84 and 89% of those 85+ reported mobility and agility related disabilities
- 47% of those 75 to 84 and 65% of those 85+ reported hearing disabilities

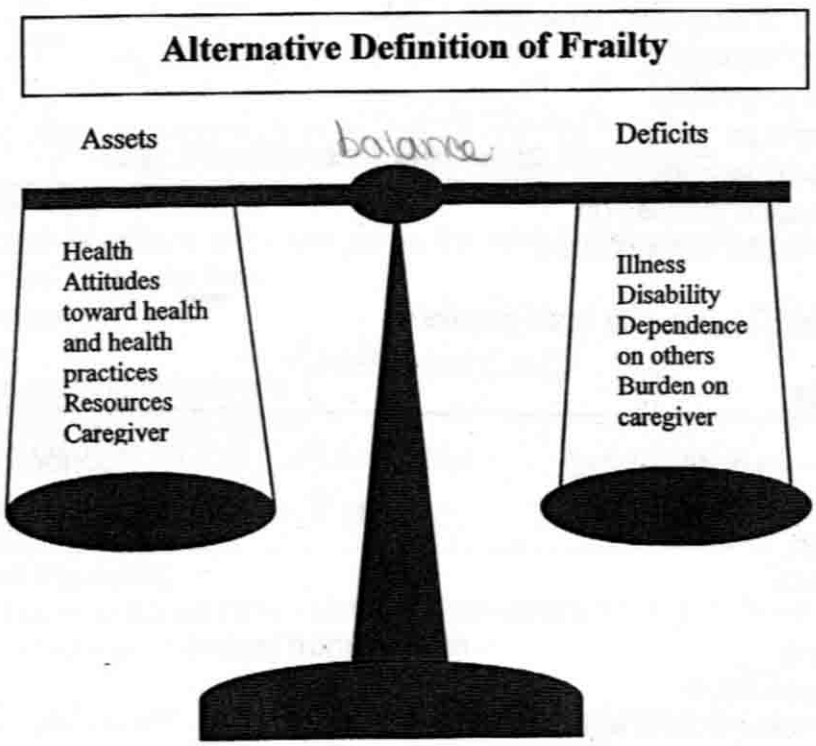


Fig.1: Dynamic model of frailty in elderly people, in which the balance between assets (left) and deficits (right) determines whether a person can maintain independence in the community.
CMAJ, 1994:150(4)

The Three Greatest Fears Facing Seniors

Health Canada 1996

1. Poor Health
2. Loss of Independence
3. Inadequate Income

Determinants of Independence

Marshall, 1995

- Health
- Wealth
- Social Integration

Predictors of Institutionalization

- availability of long-term care beds
- absence of caregiver
- functional incapacity
- advancing age
- presence of dementia
- recent hospital admission
- physical health deterioration

unsafe
not normal person anymore
lose insight - don't know they are in trouble.

Note: lack of informal support is main predictor

Geriatric Giants

eg. caregiver dies

1. Delirium – acute onset - electrolyte, drug interactions, surgery.
2. Dementia chronic - prob't w/elderly.
3. Depression
4. Incontinence
5. Falling
6. Medications
7. Illness Interactions
8. Atypical Presentations in the Elderly

Incidence of Delirium in the Acute Care Hospital > 65

1988	Francis	25.4% med
1992	Francis	22% med
1995	Chonchubhair et al	10% elderly gen/sx 20% elderly ortho/sx
1991	Levkoff	up to 51% med/sx

more prevelent w/ elderly + those w/ dementia

CMAJ, 1994:150(6)

Canadian Study of Health and Aging Prevalence of Dementia

↑ can't form new memories - behaviour problems

	All Causes	Alzheimer's	Multi-Infarct Dementia
> 65	8% 2♀/1♂	5.1%	1.5%
65-74	2.4%	1.0%	0.6%
>85	34.5%	26%	4.8%

disease of older age

↳ boundary is becoming narrower.

Key Features of Geriatric Medicine

Geriatric Syndromes

The following are common final pathways by which failures in a variety of organ systems can manifest themselves:

- Confusion
- Falls
- Dizziness and imbalance
- Immobility and dysmobility
- Incontinence
- Fatigue
- Weight loss

Management of Disability

Management should focus on function rather than diagnosis, care rather than cure, and independence rather than freedom from disease.

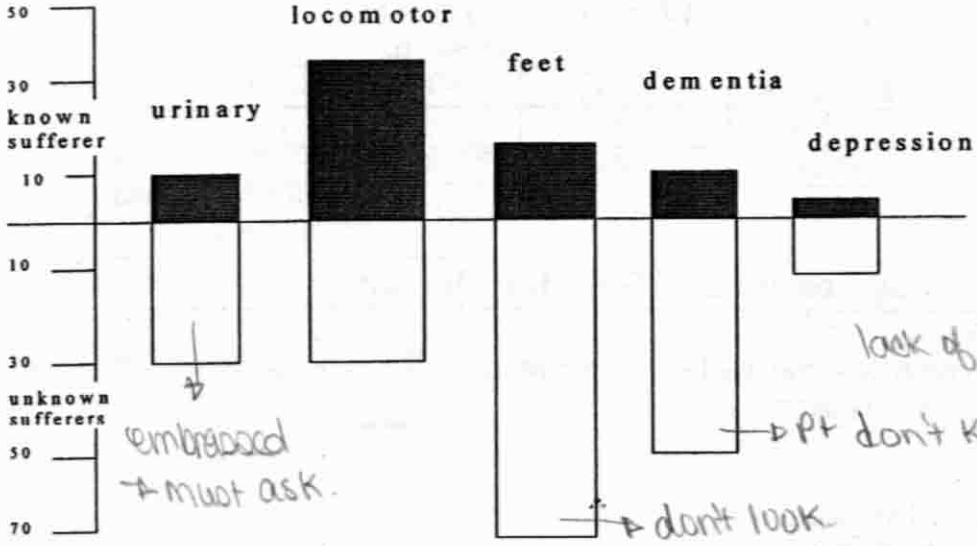
Low Therapeutic Ratios with High Risk of Harming the Patient

The most common preventable condition in geriatrics is Iatrogenic disease; its avoidance and detection are hallmarks of high-quality geriatric care.

Prevalence of Depression

Age	Diagnosis	Setting	Prevalence
18-29	MAD-D	Community	2.9%
≥ 65	MAD-D	Community	0.9%
≥ 65	Dysthymia	Community	2.0%
≥ 65	Bipolar	Community	0.1%
≥ 65	Clinically significant depressive symptoms	Community	8 to 15%
≥ 65	MAD-D	Hospitals	11%
≥ 65	MAD-D	LTC facilities	12%

Figure 12.2: Unknown Disabilities in Older Persons: Disabilities in which Most of the Iceberg is Submerged (practitioner's awareness is low)



falling
fear
isolation
conditioning

Typical Altered Presentations of Specific Illness in the Elderly

- Depression without sadness → illness, fatigue, agitated
- Infectious disease without leukocytosis, fever, or tachycardia ↓ immune response
- Silent surgical abdomen
- Silent malignancy ("mass without symptoms")
- Nondyspneic pulmonary edema
- Apathetic thyrotoxicosis

Comprehensive Geriatric Assessment

- HX
- COLLATERAL - dementia, maybe ashamed, need people to help.
- Fe - fon exam
- Pex - physical exam
- Msex - menta exam
- Functional assessment - activity of daily living
- Informal supports
- DRUG review
- Nutritional review
- Investigations
- HOME assessment
- Risk assessment - falling, driving, depression, finances / physical abuse.
- Health prevention/promotion issues
- Advance directives

1. PROBLEMS
2. PRIORITIES
3. GOALS
4. CARE PLAN

Informal Caregiving

- 80 % of care provided for seniors is informal care by family and friends
- government policies shifting care to the community increase caregiver responsibilities
- the majority of informal caregivers are women (most are either the spouse or daughter)
- women find caregiving more stressful than men
- most caregivers are over 60 themselves and suffer from their own health care problems
- care for the caregiver: "talk or action"
- in a US study 52% of caregivers were under significant strain (Marchi-Jones 1996)
- caregiver groups and education
- respite care

Prevention and Health Promotion for Seniors

1. Health Enhancement
   - exercise
   - diet
   - coping skills (eg. stress reduction techniques, assertiveness skills)
   - socialization

2. Risk Avoidance
   - oral health
   - driving competency assessments
   - flu shots, pneumococcal vaccines
   - powers of attorney, advanced directives, levels of intervention
   - foot care
   - falls risk assessment

3. Risk Reduction
   - smoking
   - alcohol
   - medication knowledge, management
   - mobility aids
   - home safety
   - sun screens
   - optimize sensory input (sight, hearing)
   - incontinence
   - osteoporosis management

4. Early Identification
   - pap smears
   - mammograms
   - rectal examinations
   - blood pressure
   - thyroid status

5. Complication Reduction

What Should Be Screened

Current Recommendations:

A.	Breast Cancer	
	• Annual mammography and CBE aged 50-69	A
	• Annual mammography and CBE aged 40-49	D
	• Teaching breast self-exam	C
B.	Cervical Cancer	
	• Annual pap smear when sex, active or age 18, after 2 normal smears do q3yr to age 69	B
C.	Colon Cancer	
	• Hemoccult annually after age 40 (high false positive)	C
	• Sigmoidoscopy after 40 +/- a family history	C
	• Colonoscopy in cancer family syndrome (interval ?)	B
D.	Prostate Cancer	
	• DRE annual after age 50 (effectiveness of tx?)	C
	• PSA (high false positive rate – 67% get unnec. bx)	D
E.	Hypertension	
	• Measure BP at any visit, if > 140/90 repeat 2 more times over 6 months Check BP at least q5yr to age 50, then q2yr>50	B
	• Treat diastolic >90 in age 21-64	A
	• Treat systolic >160 (diastolic <90) age 60-84	A
F.	Cholesterol	
	• Case finding in men aged 20-59 with other risk factors	C
	• Treat with fat modified diet for Chol. >6.85 (or LDL>4.9) with drug also if Chol. Persists >6.85 (or LDL >4.5)	B
G.	Obesity	
	• BMI measurement to identify person at increased risk for CAD, HBP, hyperlipidemia and diabetes. However, long term wt. reduction has been ineffective	C
H.	Immunizations	
	• Td – q10yr	
	• Influenza – annually for high risk groups	B
	• Outreach strategies for high risk groups	A
	• Pneumococcal-for living independently >55	C
	- for sick cell/splenectomized and immunocomprimized	
	> 55 institutionalized	A
I.	TB	
	• Skin test and/or INH prophylaxis in high risk populations	A/B
J.	Diabetic Retinopathy	
	• Funduscopy or retinal photography	B
K.	Progressive Renal	
	• Use dip stick in IDDM	A

Counselling Recommendations

A.	Smoking – cessation counselling and f/u visits - referral to help programs - school based programs to prevent initiation	A
B.	Neural Tube Defect – advise folic acid supplement	A
C.	Hearing Loss – noise control programs; hearing problems	A
D.	Dental Caries – water fluoridation (20-40% reduction) (Or fluoride supplementation) - topical application of fluoride for high risk	A
E.	MVA injured – seat belt use – legislation - physician counselling - drinking and driving – legislation - counselling	A B A C
F.	All cause morbidity and mortality -physical activity counselling – re CHD, HBP, NIDDM (no studies showing influence of MD) Risk of MI	 B
G.	Problem Drinking – Case finding followed by advice	B
H.	Perimenopausal women – counsel re risks/benefits of ERT - treatment should be individualized	B
I.	Congenital rubella syndrome – screen and vaccinate all women at risk	B
J.	Gonorrhea – counselling and educational materials - prevent spread (abstinence and/or condom) - screen those at high risk (also for chlamydia)	 B A
K.	Skin Cancer – avoid exposure, use protective clothing - sunscreen use – inconclusive evidence	B C
L.	Diet related illness - counselling	 B
M.	Osteoporosis fractures - counselling, ERT	 B
N.	Lung cancer - dietary advice on leafy green vegetables and fruit	 B