REVES 17

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A multi-dimensional approach to aging, disease and functionality to estimate health life expectancies

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- Health status of the elderly is depicted by a complicated and interwoven set of physical, mental and functionality conditions
- Such description might be an understandable and useful picture for an individual
- The question is how to evaluate an aging population when demographic and health related characteristics are so complex and heterogeneous to be summarized in macro indicators

Crimmins, Mathers, Robine, , , ,

Indicators should be chosen in regard to:

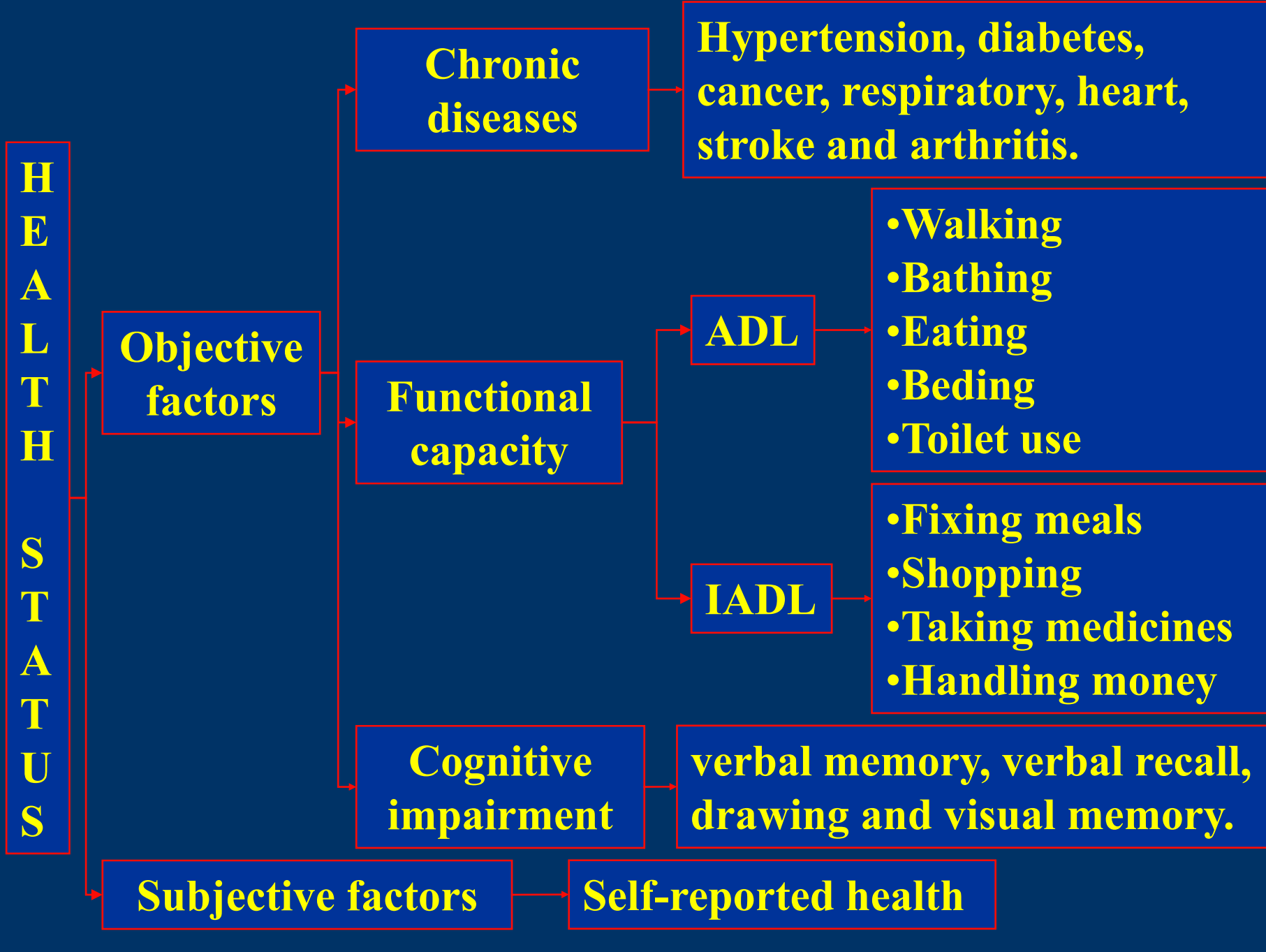
- Identification of health issues
- Policy design and application
- Data availability (this is most frequently the decisive factor)

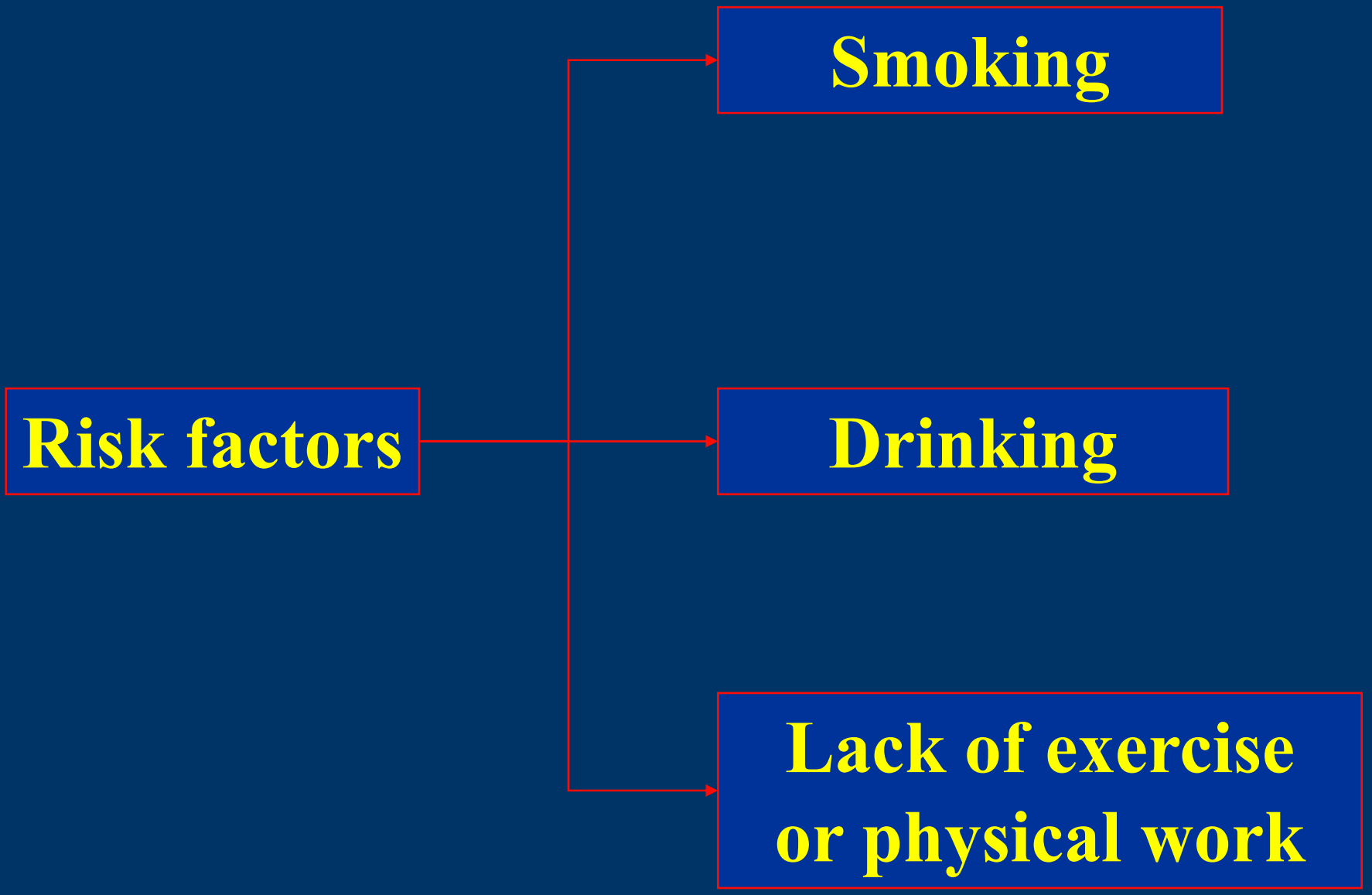
The Mexican Health and Aging Study (MHAS)

- The first panel survey on aging in México, 2001 and 2003
- Population 50 + ; 15,000 cases
- Data on health (self report, symptoms, functional capacity, health behaviors, health care services, depression, pain, cognitive impairment)
- Characteristics on family, households, economics, migration

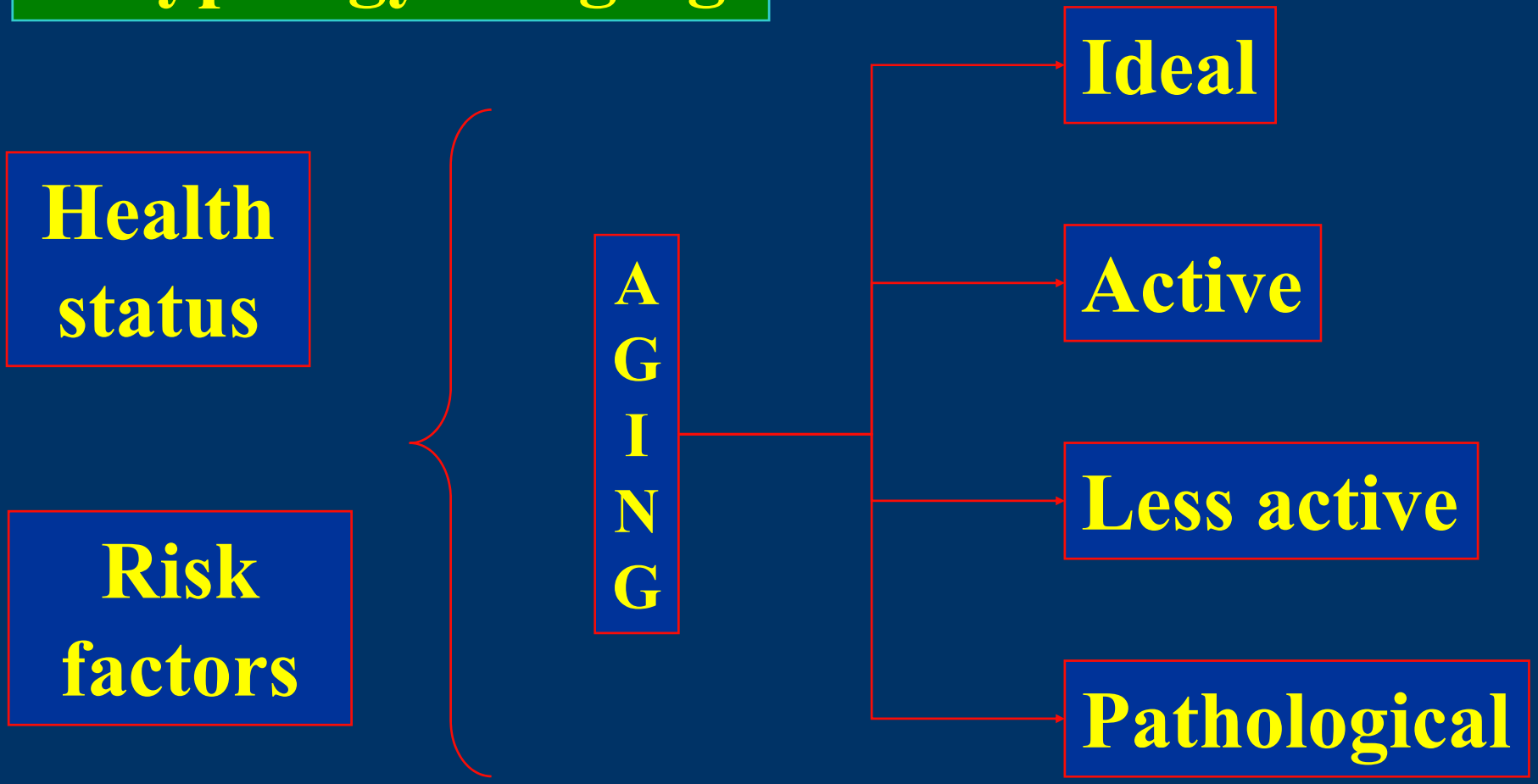
Proposing two examples of multi-dimensional approach

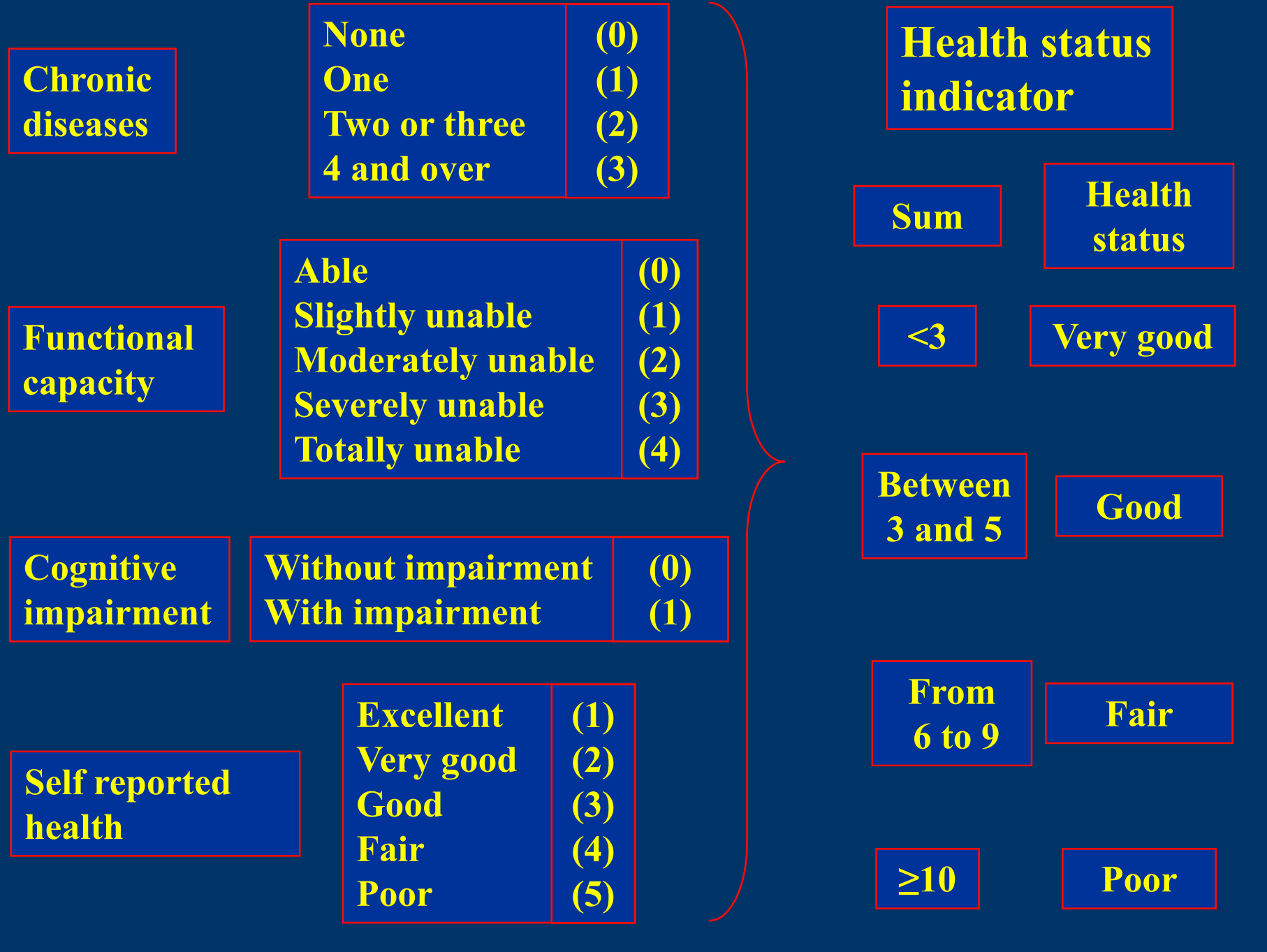
- A typology of aging, functionality and health
- A classification of health through diseases, disabilities and impairments


HEALTH STATUS
Objective factors
Subjective factors
Chronic diseases
Hypertension, diabetes, cancer, respiratory, heart, stroke and arthritis.
Functional capacity
ADL
•Walking
•Bathing
•Eating
•Beding
•Toilet use
IADL
•Fixing meals
•Shopping
•Taking medicines
•Handling money
Cognitive impairment
verbal memory, verbal recall, drawing and visual memory.
Self-reported health


Smoking
Risk factors
Drinking
Lack of exercise
or physical work

A typology of aging

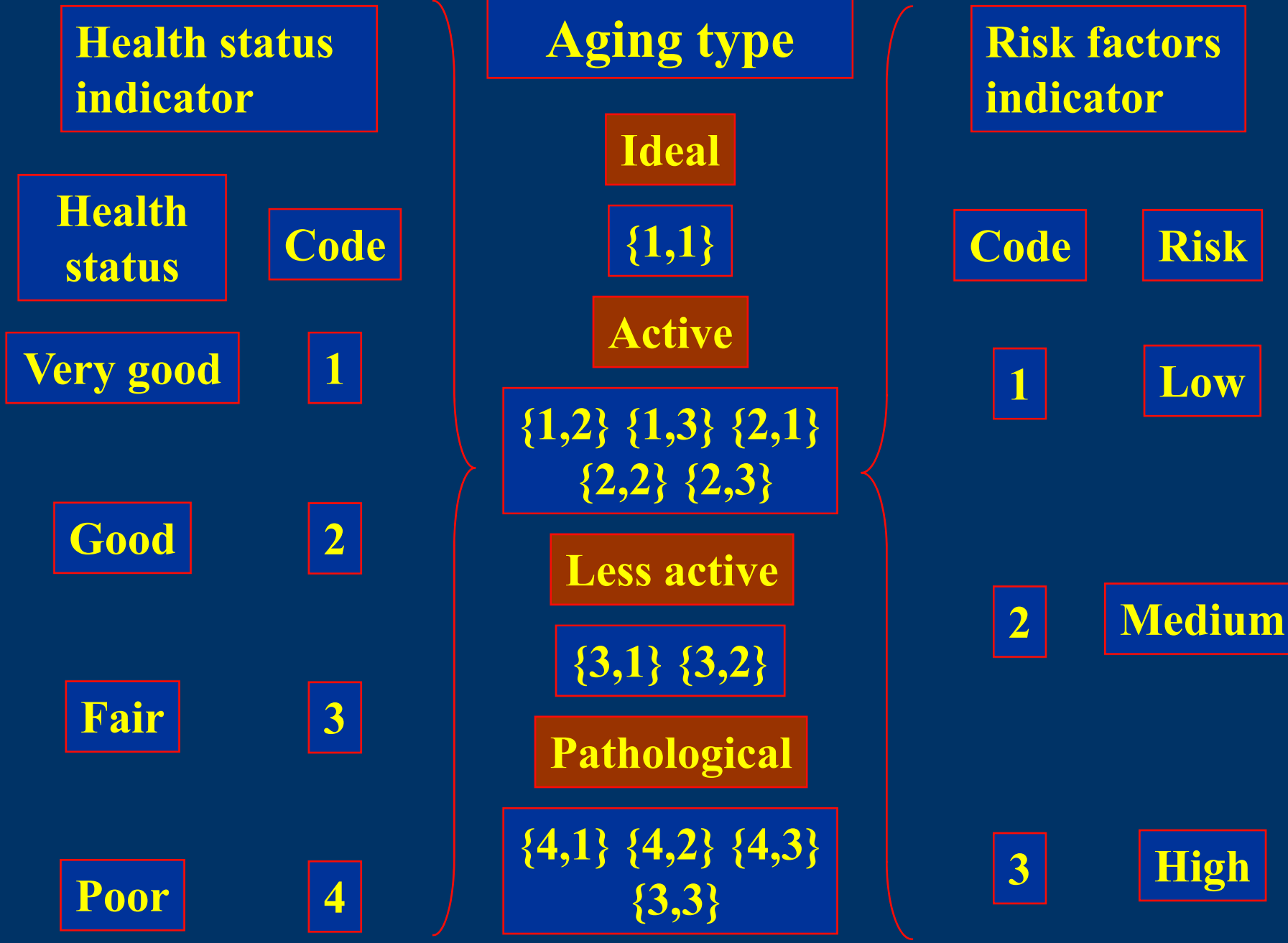



Chronic diseases
None (0)
One (1)
Two or three (2)
4 and over (3)
Functional capacity
Able (0)
Slightly unable (1)
Moderately unable (2)
Severely unable (3)
Totally unable (4)
Cognitive impairment
Without impairment (0)
With impairment (1)
Self reported health
Excellent (1)
Very good (2)
Good (3)
Fair (4)
Poor (5)
Health status indicator
Sum
Health status
<3
Very good
Between 3 and 5
Good
From 6 to 9
Fair
≥10
Poor

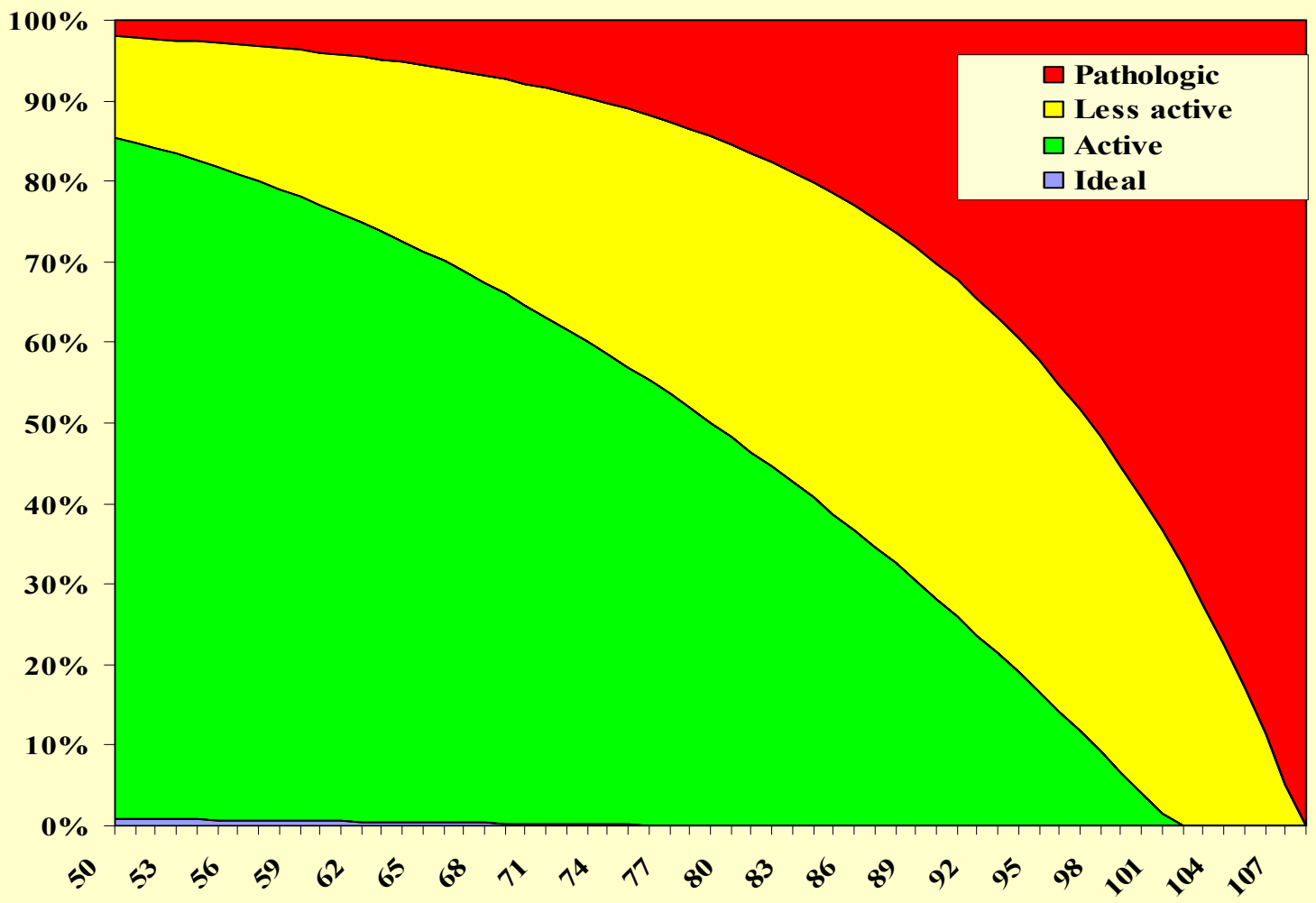
Risk factors indicator

Risk	Combinations
Low	{0,4,8}
Medium	All other combinations
High	{0,7,9} {1,7,9} {2,7,9} {3,4,9} {3,5,9} {3,6,9} {3,7,8} {3,7,9}

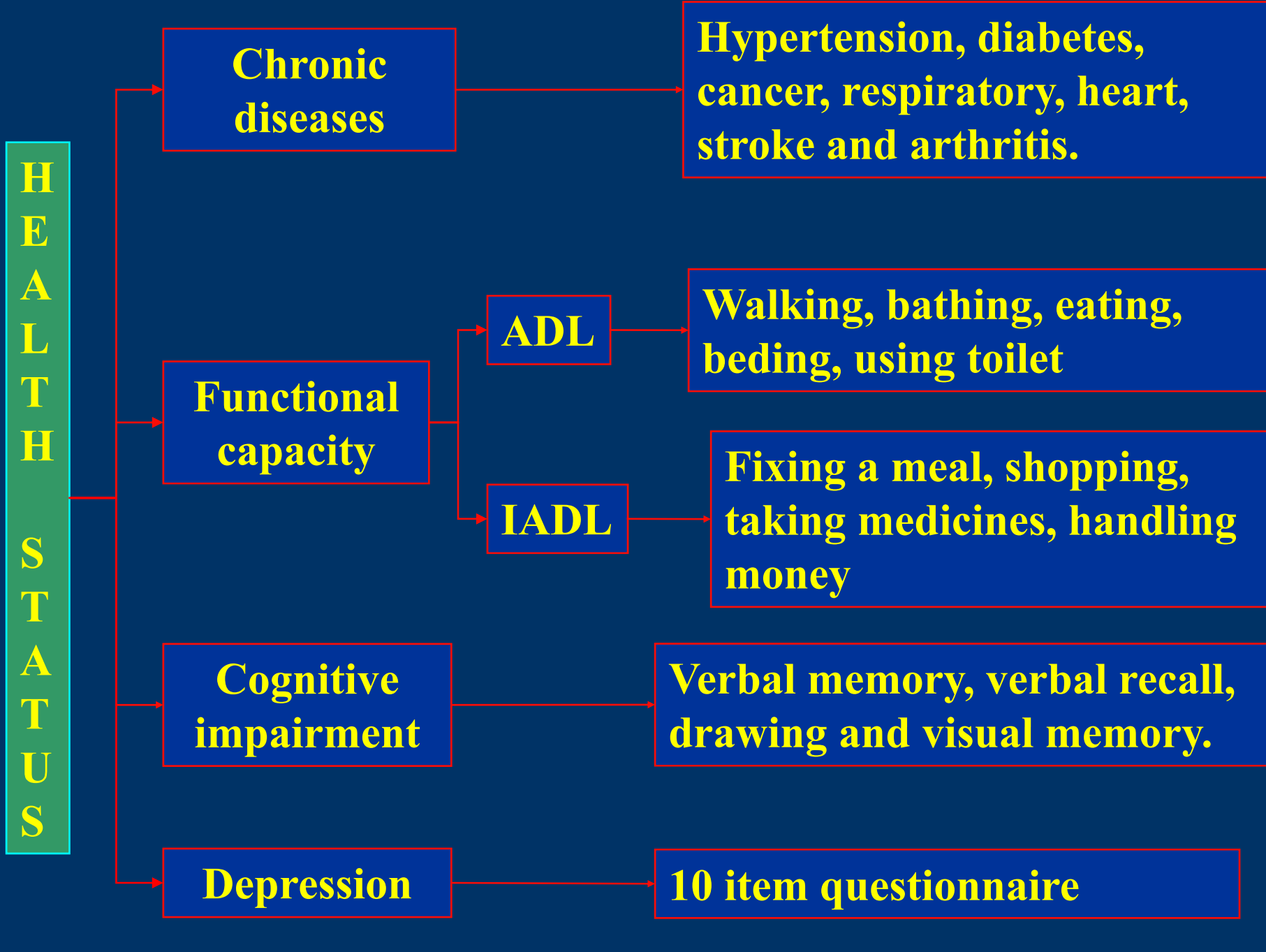
(0)	None	Smoking
(1)	Low	
(2)	Moderate	
(3)	High	
(4)	None	Drinking
(5)	Occasional	
(6)	Moderate	
(7)	High	
(8)	Yes	Exercise or physical work
(9)	No	


Health status indicator
Health status
Code
Very good
1
Good
2
Fair
3
Poor
4
Aging type
Ideal
{1,1}
Active
{1,2} {1,3} {2,1} {2,2} {2,3}
Less active
{3,1} {3,2}
Pathological
{4,1} {4,2} {4,3} {3,3}
Risk factors indicator
Code
Risk
1
Low
2
Medium
3
High

Prevalence of aging types



LE, ILE, ALE, LALE, PLE									
	E(x)	ideal	act.	less act.	path.	% I	% A	%LA	% P
50	27.9	0.1	18.7	6.8	2.3	0.4	66.9	24.3	8.3
60	20.3	0.0	12.0	5.9	2.3	0.2	59.2	29.1	11.4
70	13.9	0.0	6.8	4.8	2.3	0.1	49.2	34.4	16.3
80	8.8	0.0	3.2	3.5	2.2	0.0	36.1	39.1	24.7
90	5.3	0.0	1.0	2.1	2.1	0.0	19.5	40.3	40.2

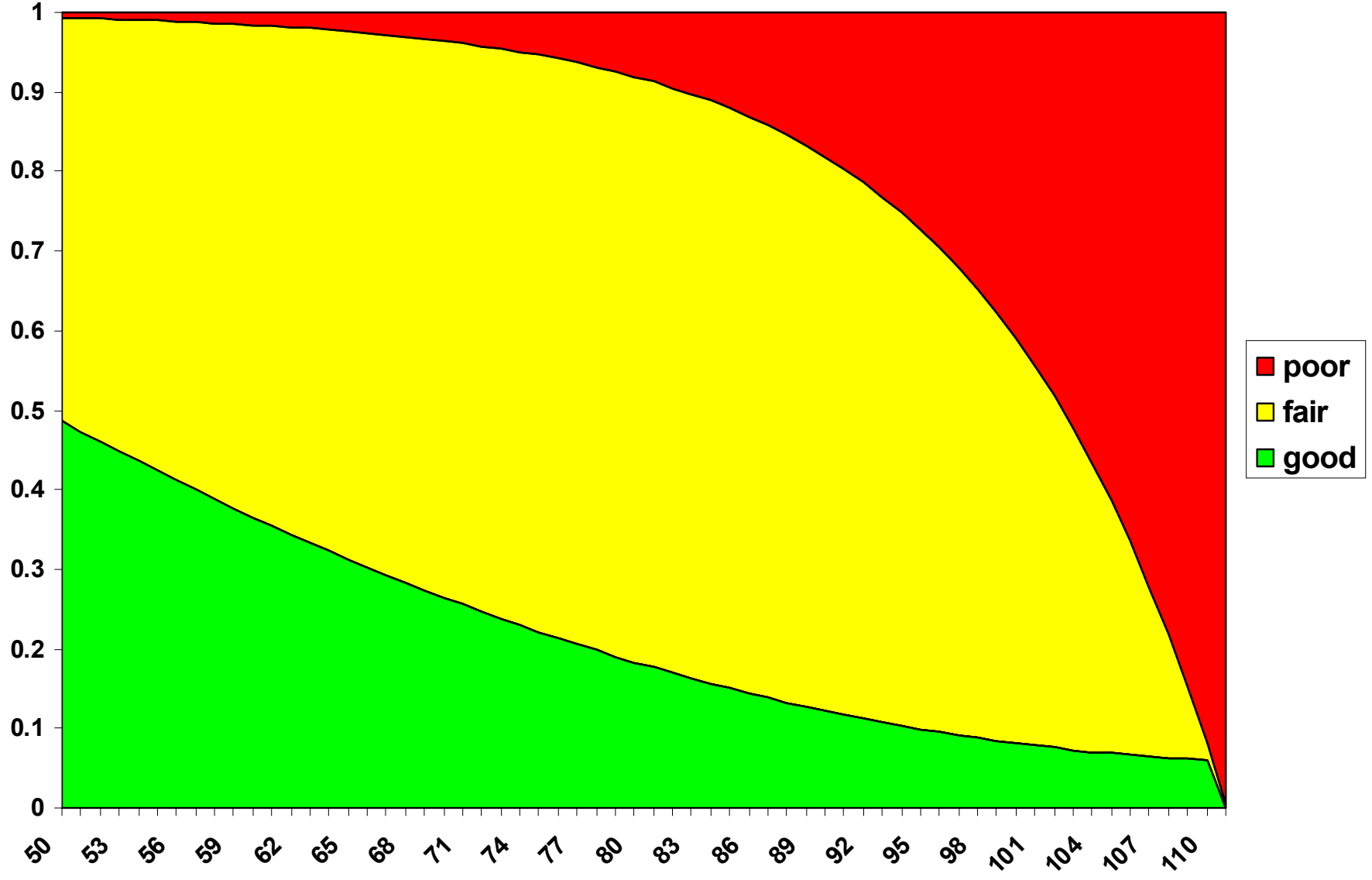

HEALTH STATUS
Chronic diseases
Hypertension, diabetes, cancer, respiratory, heart, stroke and arthritis.
Functional capacity
ADL
Walking, bathing, eating, beding, using toilet
IADL
Fixing a meal, shopping, taking medicines, handling money
Cognitive impairment
Verbal memory, verbal recall, drawing and visual memory.
Depression
10 item questionnaire

Indicators	Categories	
Chronic diseases	None	(0)
	One	(1)
	Two or three	(2)
	4 and over	(3)
Functional capacity	Able	(0)
	Slightly unable	(1)
	Moderately unable	(2)
	Severely unable	(3)
	Totally unable	(4)
Cognitive impairment	None	(0)
	With cognitive impairment	(1)
Depression	None	(0)
	Established	(1)

Health Status

Good	All indicators have 0 code.
Fair	All other cases.
Poor	Severely or totally unable on functional capacity and/or at least 2 indicators in their highest code.

Prevalence of good, fair and poor aging status. Men, 2000



LE, GHLE, FHLE, PHLE							
Age	E(x)	Good	Fair	Poor	%G	%F	%P
50	27.9	8.8	18.0	1.1	31.5	64.5	3.9
60	20.3	5.1	14.0	1.2	25.1	69.0	5.9
70	13.9	2.7	9.9	1.3	19.4	71.2	9.4
80	8.8	1.2	6.2	1.4	13.6	70.5	15.9
90	5.3	0.5	3.4	1.4	9.4	64.2	26.4

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谢谢