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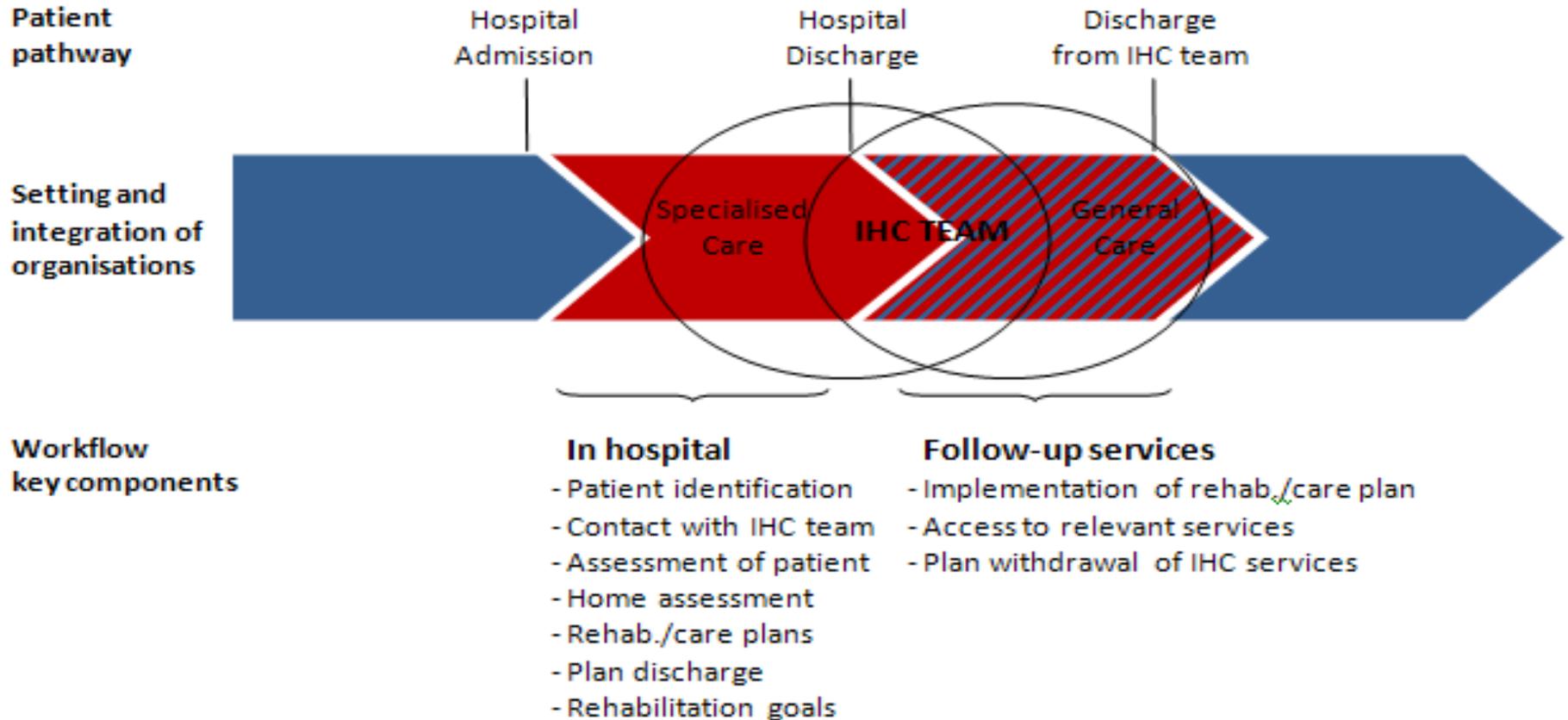
Neuroeconomics and Organization of Integrated Care

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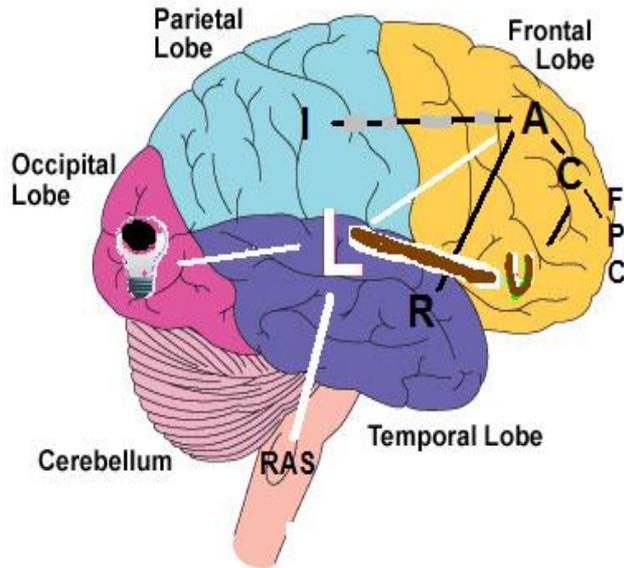
IHC as interorganisation collaboration



IHC relies on *horizontal coordination* demanding *patient-centric self-management* of the staff

Neuroeconomic Model (NeM)

-Signal-to-noise-ratio of the CNS



$$C = A/U \rightarrow 1 \text{ (Power-of-concent.)}$$

$$A = R * c \text{ (Working Memory)}$$

$$U = L(x)/c \text{ (Preferences)}$$

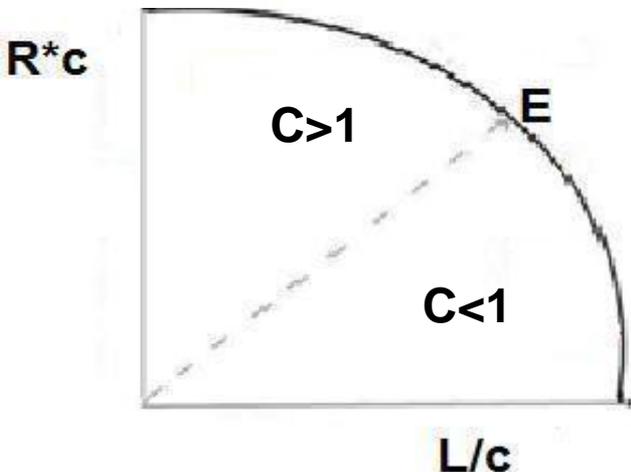
(I) as stochastic knowledge (ϵ)

$$C = R * c^2 / L(x) + \epsilon \rightarrow 1$$

$C > 1$ is fragmented knowledge (Cognitive stress)

$C < 1$ is insecurity (Emotional stress)

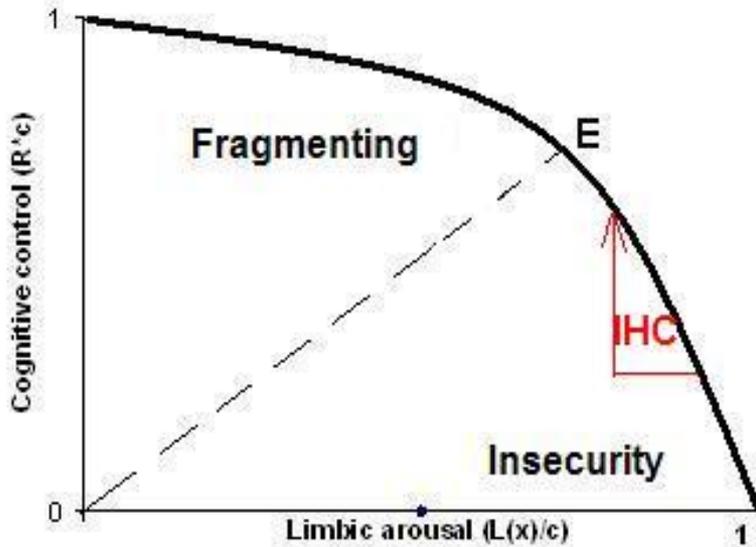
$C = 1$ is an open-ended rationality minimizing prediction error



Source: Larsen T (2010): *Neuroeconomics and Public Health*. integratedhomecare.eu Acta Systemica, 10(1)

Ap1: NeM and Integrated Homecare

Frontal Executive Integration



NeM explains the mental effect of IHC as Limbic relaxation (BP declines 5-7 mmHg) reinforcing the cognitive function. This mental effect explains, how IHC improves ADL-efficacy for stroke patients without improving specific somatic functions as recorded by BI, FIM or AMPS.

Parallel results for Heart Failure and COPD!

Significant outcomes:

1. **Poor outcome** as I) death, II) institution, III) readmission)

2. **ADL**burden as I) Homehelp, II) IADL, III) Caregivers burden

Ap2: NeM and Human Relations Management

Efficacy and Satisfaction



Management research (Herzberg):

Dissatisfaction (Am) with insecurity and passivity arises from neglect of structural factors

(Physical workplace, salary, hierarchy)

Reinforcing satisfaction (Ins) arises from personal job-enrichment factors (recognition, participation, responsib.)

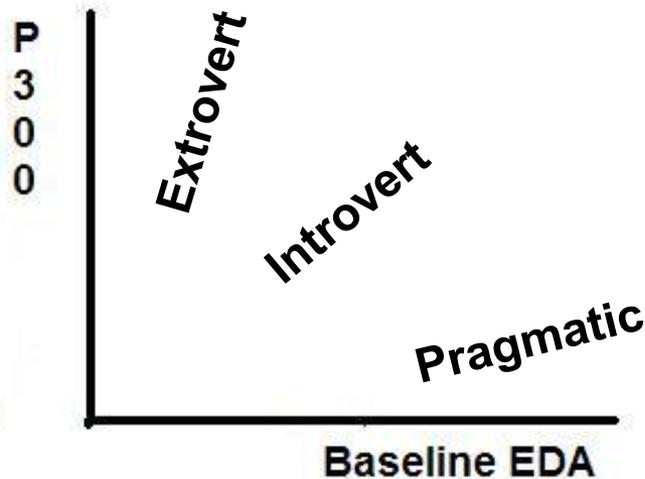
Intensity: 2 5-10 20
(Avg. home sessions)
Limbic poles: Amygdala Insula

The best workgroup efficacy is reached for a moderate to good member satisfaction



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Ap3: NeM and Coping



XY-diagram [Sequeira et al, NT2011]:

Hyper-, medium- and hypo- responders instead of a continuum

Responder-cluster and coping style:

- Cognition/pragmatism and emotions/anxiety as mental poles according to McClure and MBTI (Confirming Eysenck)
- In the cognitive spectrum introverts are more aroused than extroverts - but better to cope with stress [Wang et al: Gender difference, SCAN 2007] - wherefore they represent a medium position



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Brain and behavior

Dominant Centre	EEG pattern	Coping	Workgroup Profile	Motivator	Health risk
dIPFC	Hypo-responder	Extrovert	Task-oriented	Social status	Type A (Stress)
	Medium responder	Introvert	Relation-oriented	Participation	Type B
Amygdala	Hyper-responder	Pragmatic	Anonymous	Social security	Type C (Anxiety)
Insula/ACC	Varied pattern	Idealist	Individualist	Appraisal	(Addiction)

Conclusion: Brain processes determine performance and health



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