



The Intergenerational Virtual Village for the Promotion of Autonomy

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Programs for Autonomy and Communication for the Elderly

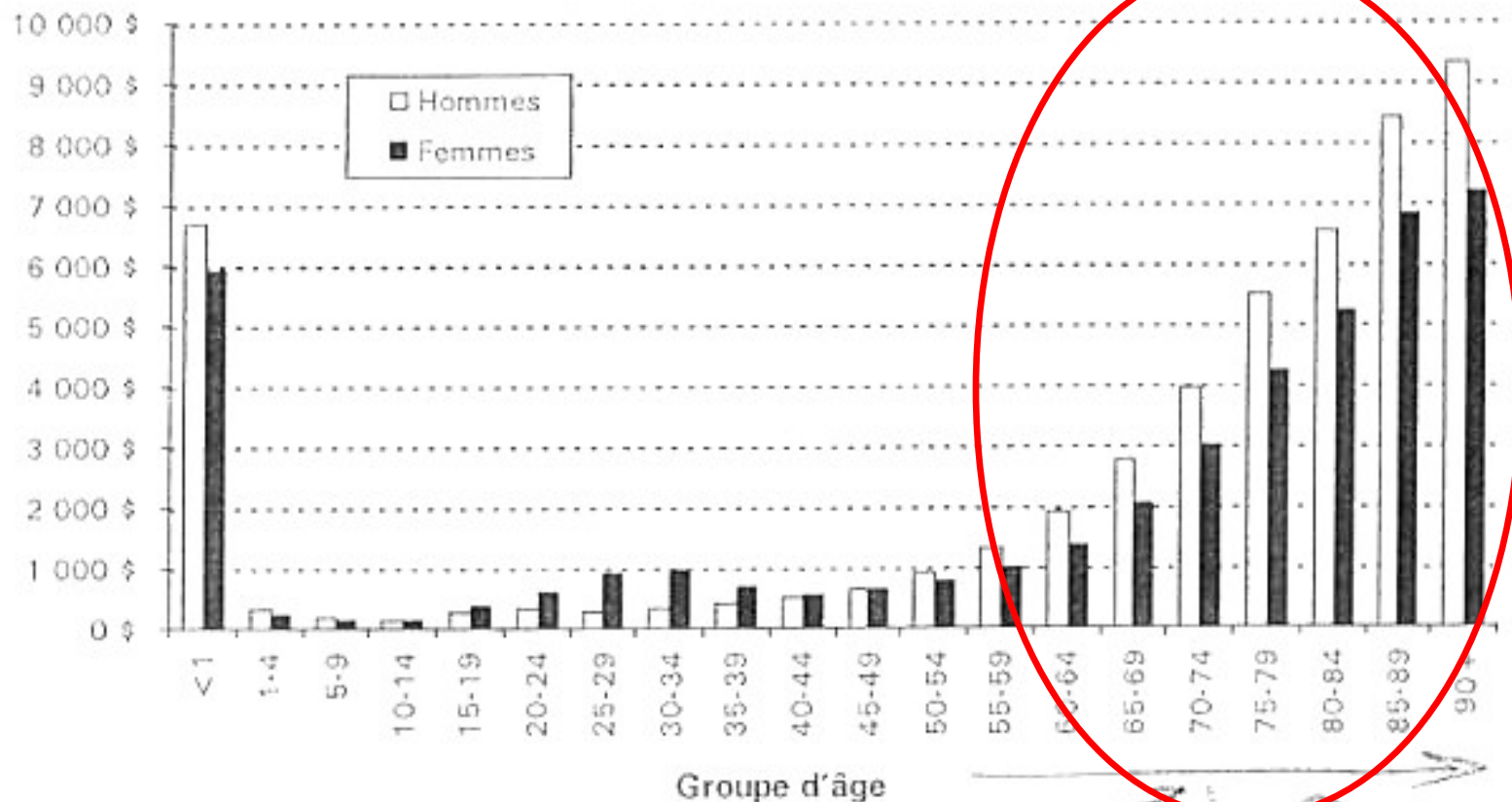
Programs for **A**utonomy and **C**ommunication for the **E**lderly
Programme pour l'Autonomie et la Communications des Aînés

ICT Medium since 1996:

Customized Videoconferencing linking Seniors and Youth
Visioconférence Personnalisée pour Aînés et Jeunes

Hospital Expenses, Mostly for Patients 60+

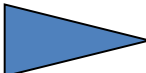
Figure 20 — Dépenses hospitalières des gouvernements provinciaux et territoriaux, par habitant, par âge et sexe, Canada, 2004



Sources : Institut canadien d'information sur la santé; Statistique Canada.

Seniors and Chronic Diseases (C.D)

At age 65, 77% of men and 85% of women have at least one chronic condition
(H.Gilmour, Statistics Canada)

 **Almost every senior aged 65+ has to deal with one or more chronic conditions in his activities of daily life.**

Isolation, a major Mortality Risk Factor

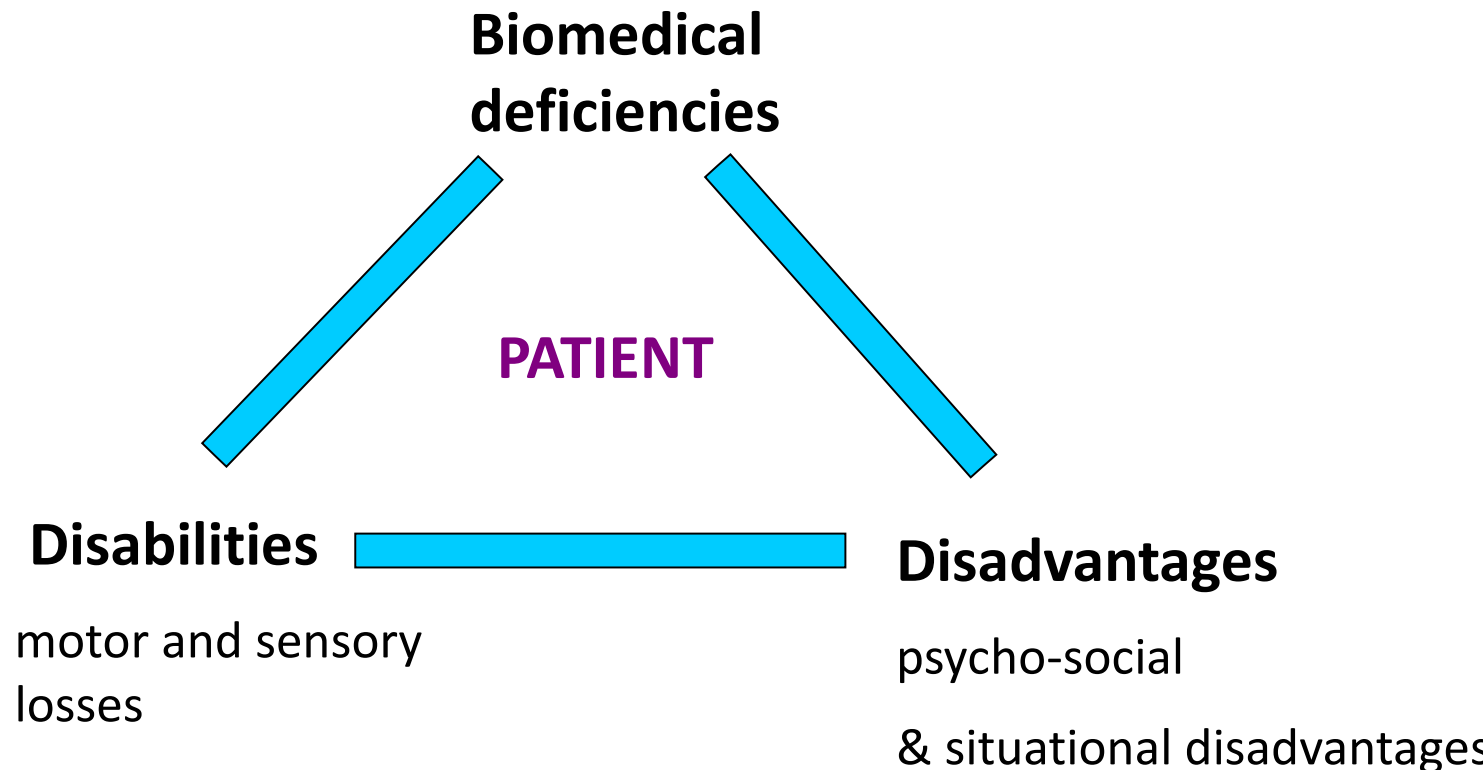
- * The lack of social relationships exert an independent influence on the risk for mortality, comparable to, or exceeding, well established mortality risk factors such as obesity and physical inactivity.
- Disabilities, situational and environmental factors as well as intervention devices contribute to patients` isolation

* Holt-Lunstad J., Smith T. B., Layton J. *Social Relationships and Mortality Risk: A Meta-analytic Review. Plos Medicine, www.plosmedicine.org; 2010 July; Vol. 7 (7), e1000316.*

Chronic Diseases: Not Just Biomedical Deficiencies

Three components to treat simultaneously:

With reference to the WHO1989 Classification of Handicap



Promotion of Autonomy and Self-Care for Seniors

1. Treating the biomedical signs:

- Home-based telemonitoring (ECG, BP, BS, etc...)
- Remote diagnostic interventions (Radiology, Ultrasounds, Dermatology, etc...)

2. Overcoming the disadvantages and disabilities of C.D:

Technology enabled human relationships:

Flexible and customized ``4D`` videoconferencing for

- **Professional contacts:** Patient-Physician/Medical staff
- **Bilateral social support:** Intergenerational Telementoring & social networks
- **Motivation to exercise and diet, main factors for healthy aging**

Building a **Socio-Medico-Economic Model**

1. ICT enabled care of biomedical deficiencies:

- **Deloitte 2008***: Using in-home monitoring devices in tandem with care management programs, to equip patients to care for themselves at home.
- **The net result is a potential annual savings of 20 percent or more** – a \$400 billion savings to the U.S. health care system – if chronic conditions and posthospitalization care is managed by involved consumers in their homes

2. ICT enabled interactions, overcoming disadvantages and disabilities, for:

- in-home trusting relationships for patients and professionals
- multidisciplinary collaborations
- internet mediated social networks and Intergenerational Telementoring

using ``4D``, **flexible and customized videoconferencing**

3. Net result,

1+2 = 40 percent or more of savings in health care costs
+ enhanced self-care, treatment adherence, and autonomy

Overcoming disadvantages and disabilities:

Intergenerational VC sessions

perennial for over 10 years

- Cross Cultural, English & french Immersion
- Educational: Sociology, History, Tele-Mentoring & coaching to healthy living
- Recreational: Virtual Play School, Puppet shows, Story telling & Reminiscences, Songs and Games
- Physiotherapy coaching, ROM telemeasurements

“4D” Videoconferencing overcoming disabilities & promoting relationships



- Verbal

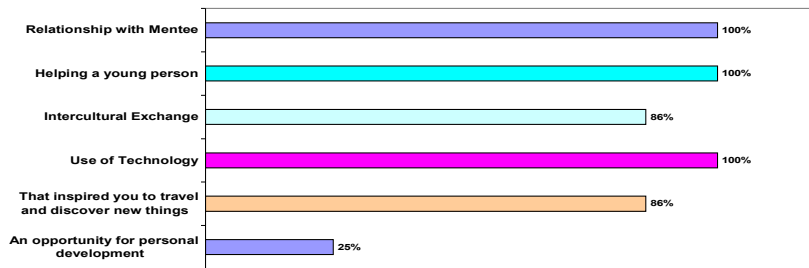
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Intergenerational Telementoring

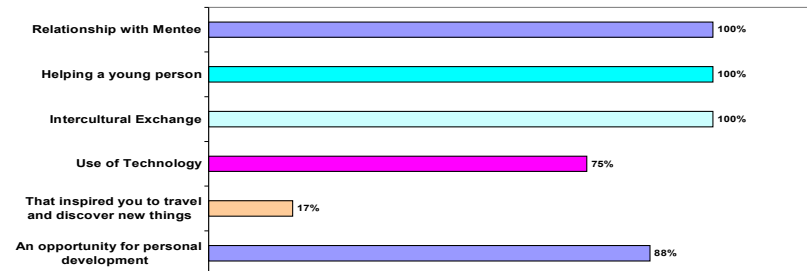
Identified Benefits*

(MM Bernard et al. J.of Gerontechnology, pending)

Learner's Identified Benefits



Tele-Mentor's Identified Benefits



Group sessions and motivation to regular physiotherapy sessions

Activities, Adaptation & Aging, 33:39–48, 2009.



Tele-rehabilitation after Orthopaedic Surgery

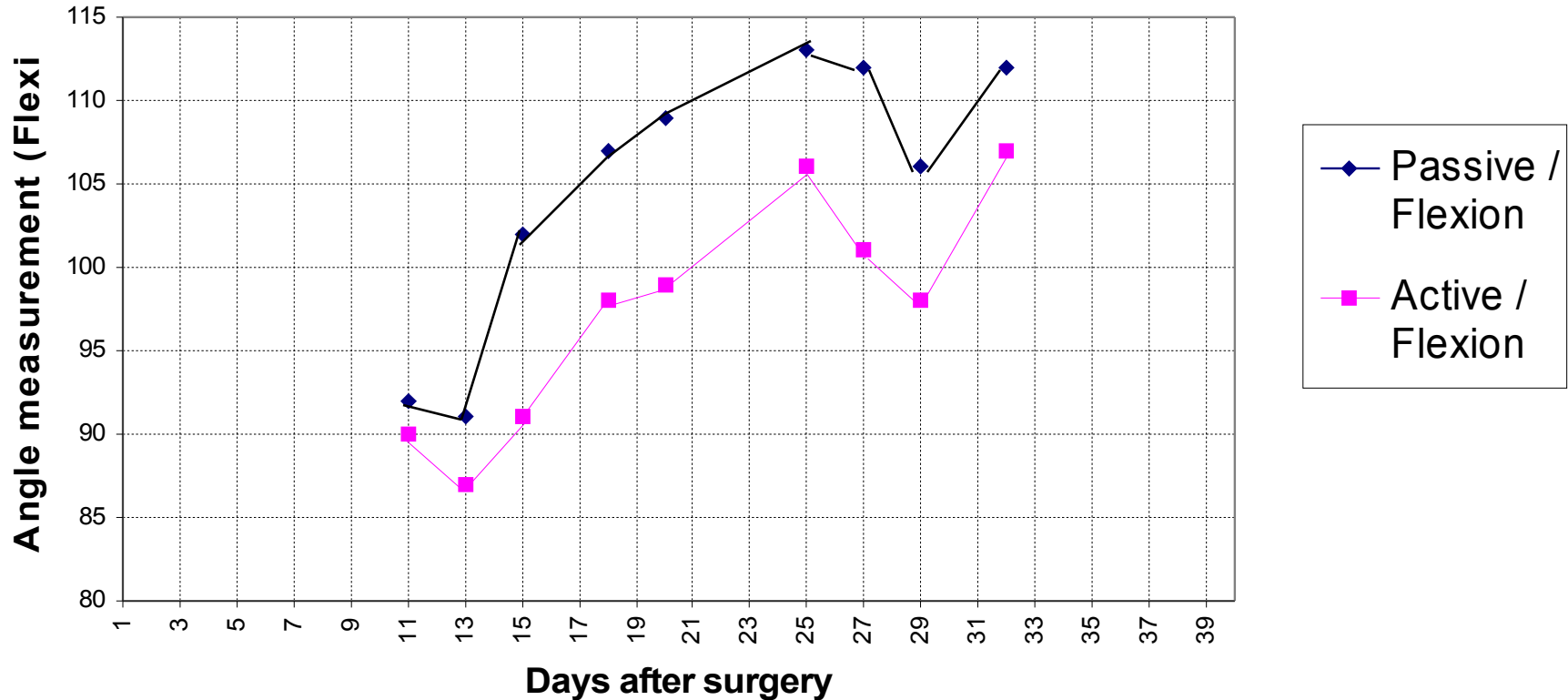
Results: Early II diagnosis; enhanced compliance and motivation*

Vie et Vieillesse, Volume 4 (3), Automne 2005; 25-32



Results: Ranges of Motion with the Videoconference Goniometer

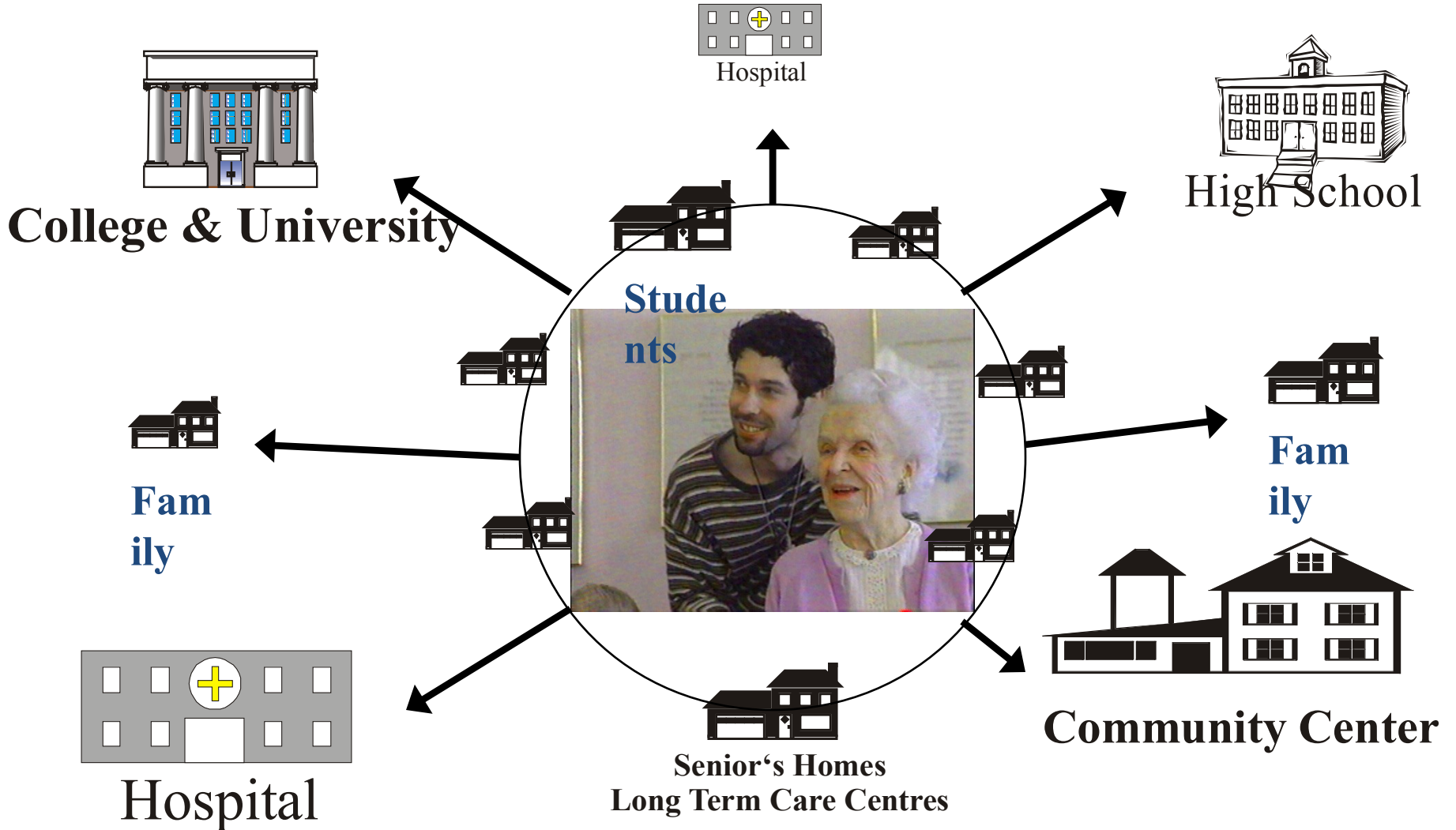
Follow-up Home Support - Patient 06



Compliance to Physiotherapy Coaching via Videoconferencing

	Patients								
	P1	P2	P3	P4	P5	P6	P7	P8	P9
Scheduled duration	4:00	4:00	4:00	4:00	4:00	4:00	4:00	4:00	4:00
Actual Duration	6:26	8:19	5:06	10:02	5:41	5:22	6:07	6:21	4:18
Number of Sessions	12/12	12/12	12/12	12/12	10/12	12/12	13/12	15/12	20/12
Compliance (Total time)	161%	208%	128%	251%	142%	135%	153%	159%	108%

The PACE 2000 Intergenerational Virtual Village



Conclusions

- Isolation, disabilities and disadvantages are penalising biomedical outcomes and autonomy
- Customized ``4D`` videoconferencing provides a powerful medium for the promotion of social relationships while overcoming disadvantages.
- **Prescribing ICT enabled relationships** is prone to substantial savings in medical expenditures

Acknowledgements

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