

Teleictus Network and the Programme for Prevention and Care of Chronic Patients (PPACP) in Catalonia.

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Evaluation Area CAHIAQ

Master Plan for Respiratory Diseases (PDMAR)

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Lulea , 20th June 2012

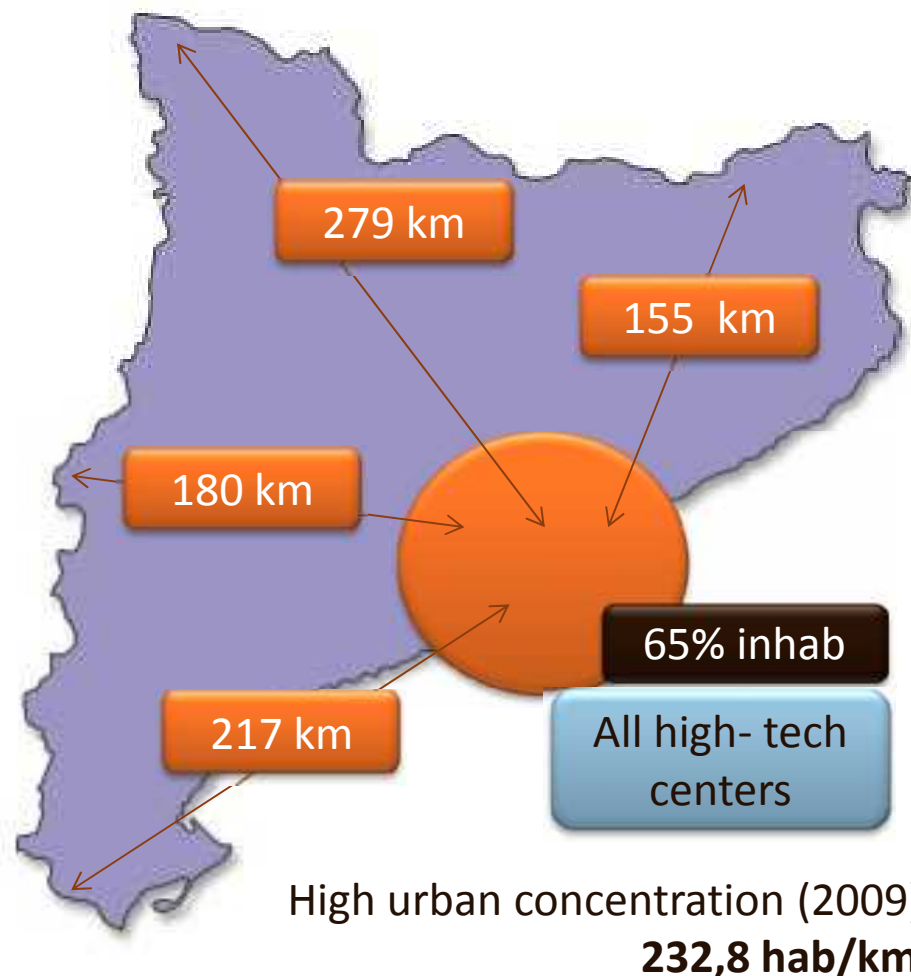


Generalitat de Catalunya
Departament de Salut



Agència d'Informació,
Avaluació i Qualitat en Salut

Catalonia

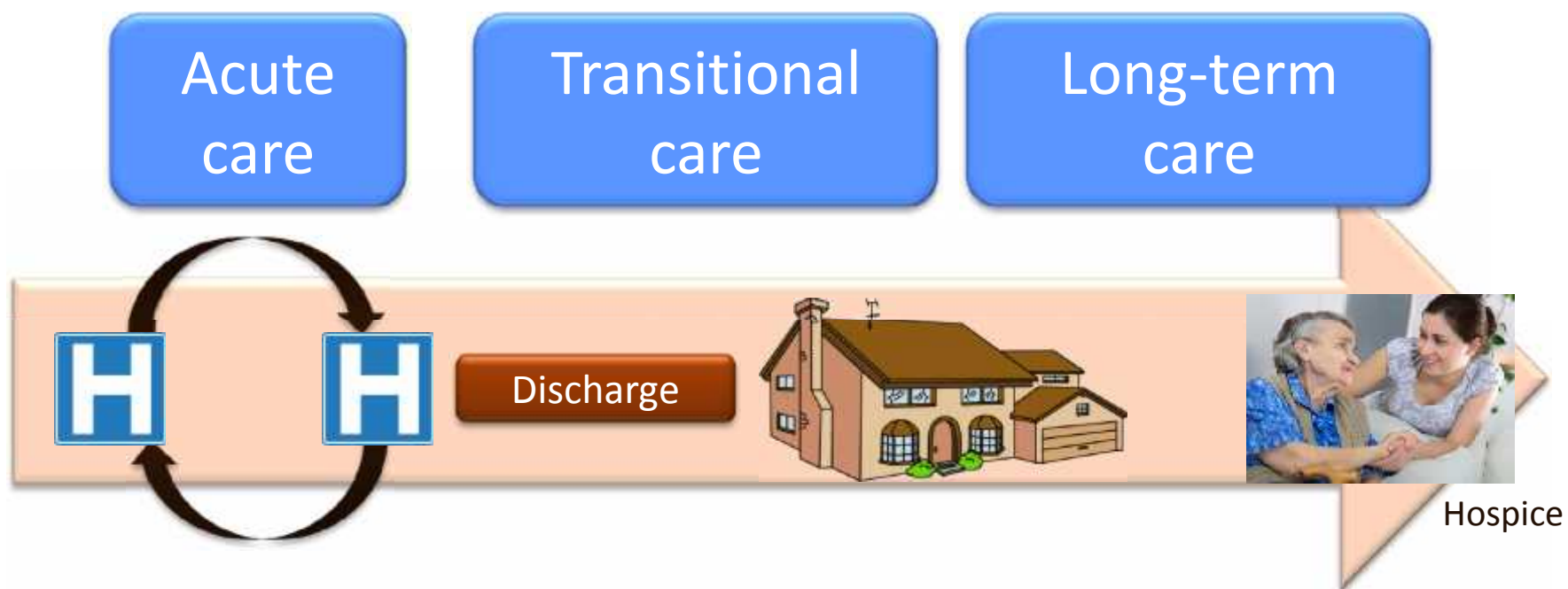


Area: **32.107 km²**
Population (2011): **7.539.000**
Life expectancy (2011): **80,55 years**
Birth rate (2010): **1,47**
Gross Mortality rate (2010): **7,92**
Infant mortality (2010): **2,63**
GDP/Capita (2009): **28.046€**
Health system: **Universal coverage financed through taxes**

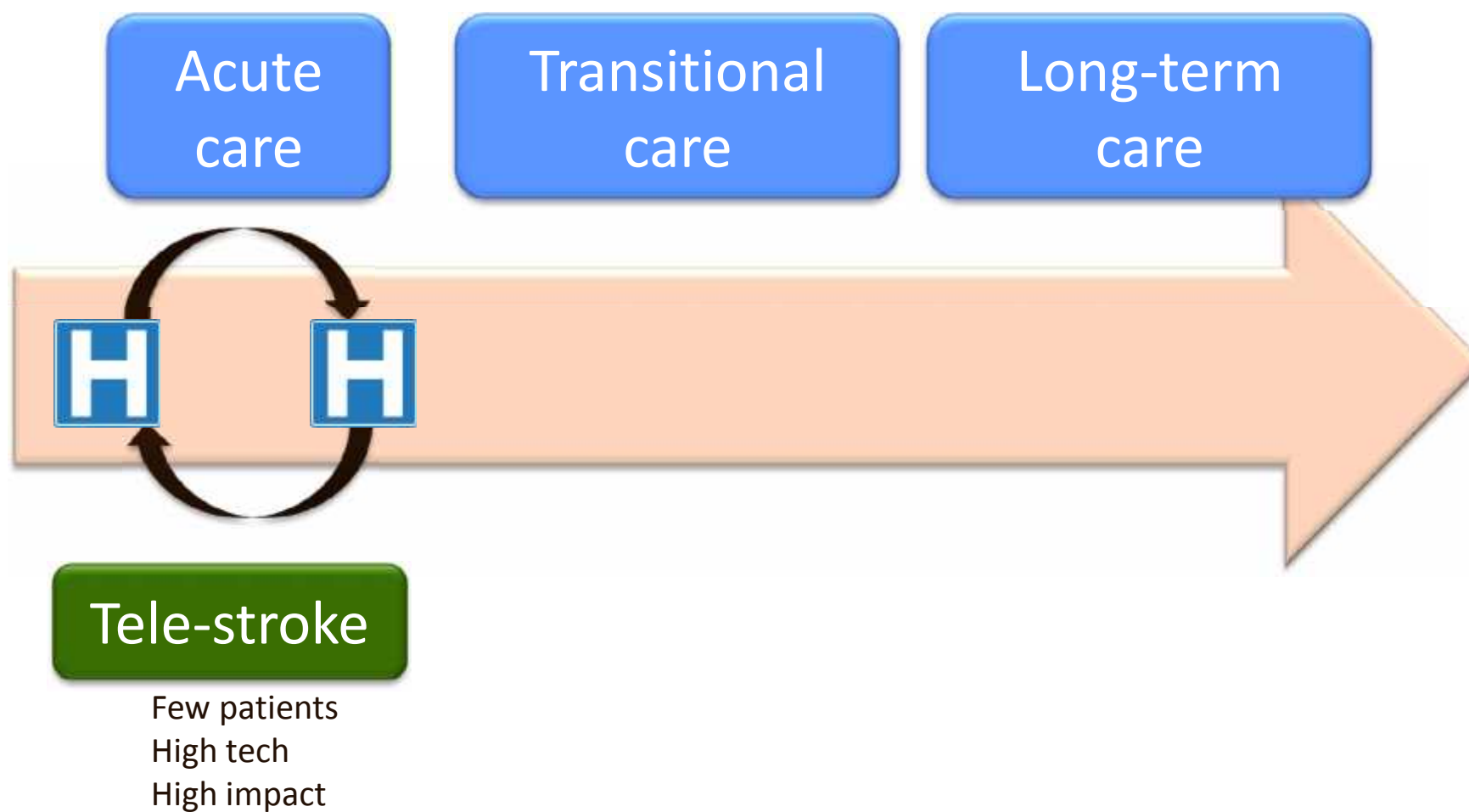


"Ciencia y Caridad" Pablo Picasso (1897)

From acute to long-term care



From acute to long-term care



TeleStroke Network: Context



Stroke =

A rapid loss of brain functions due to disturbance in the blood supply to the brain. It can be ischemic or hemorrhagic



- **15.070 people** were diagnosed with **Ictus** (7% more than the previous year).
- 1st cause of death in women and 3rd in men
- 1st cause of disability in adults.
- 76% older than 65 years

TeleStroke Network: Problems

1

Context



Urgent attention of neurologists is **needed in the early hours** to avoid the side effects of the disease (the maximum time to administer a thrombotic therapy is 3 hours)

2



Not all the Catalan hospitals have neurology services available 24/7. This centers must **send patients to referral hospitals** to receive appropriate treatment.

3



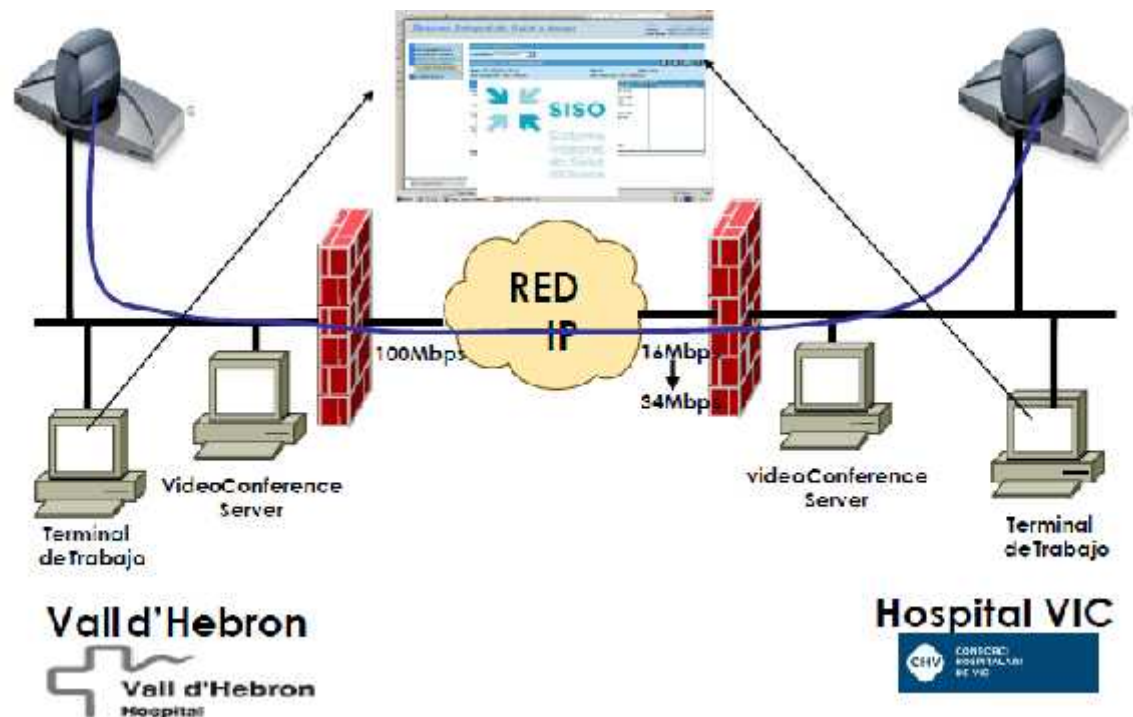
The average **time required** to send and take care of the patient between two hospitals is **1,5 hours**.

In many cases the delay is too large to implement an effective treatment for the patient and the consequences are irreversible.

TeleStroke Network



The **technical solution** is designed and adapted according to the **neurologists requirements**. It is based on a **high-quality videoconferencing system** installed in an emergency box of the regional hospital and a **remote consultation system of digital images** (PACS DICOM) to view the TAC that the patient from the regional hospital.



TeleStroke Network: A successful case

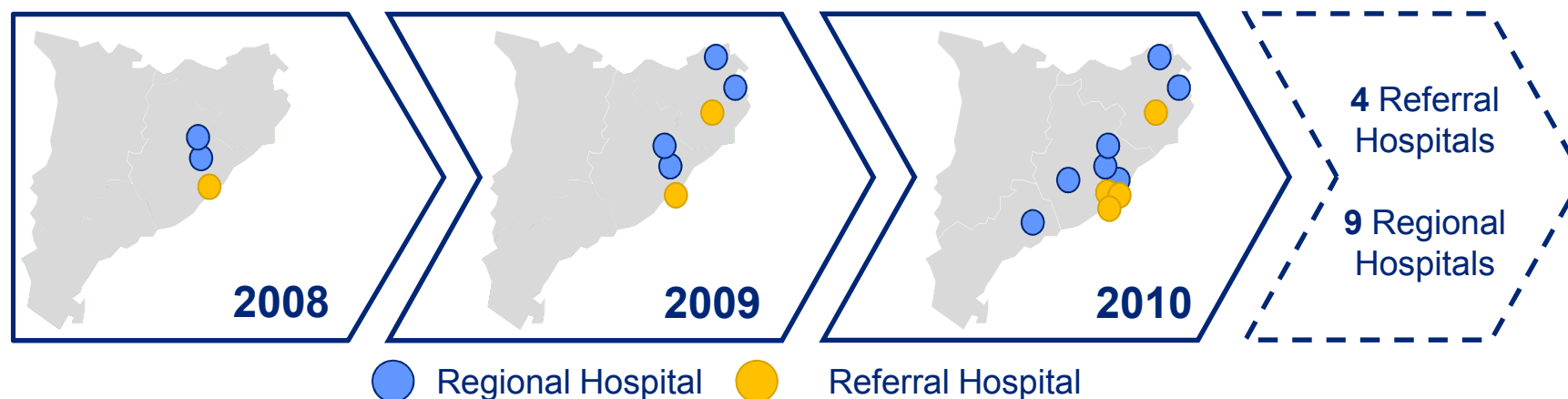
During **2009**, **49 patients** were treated through the TeleStroke system (**7,7%** of patients).

Thanks to the development of the TeleStroke Network, during the **last year**, **250 patients** could benefit from this type of telemedicine.

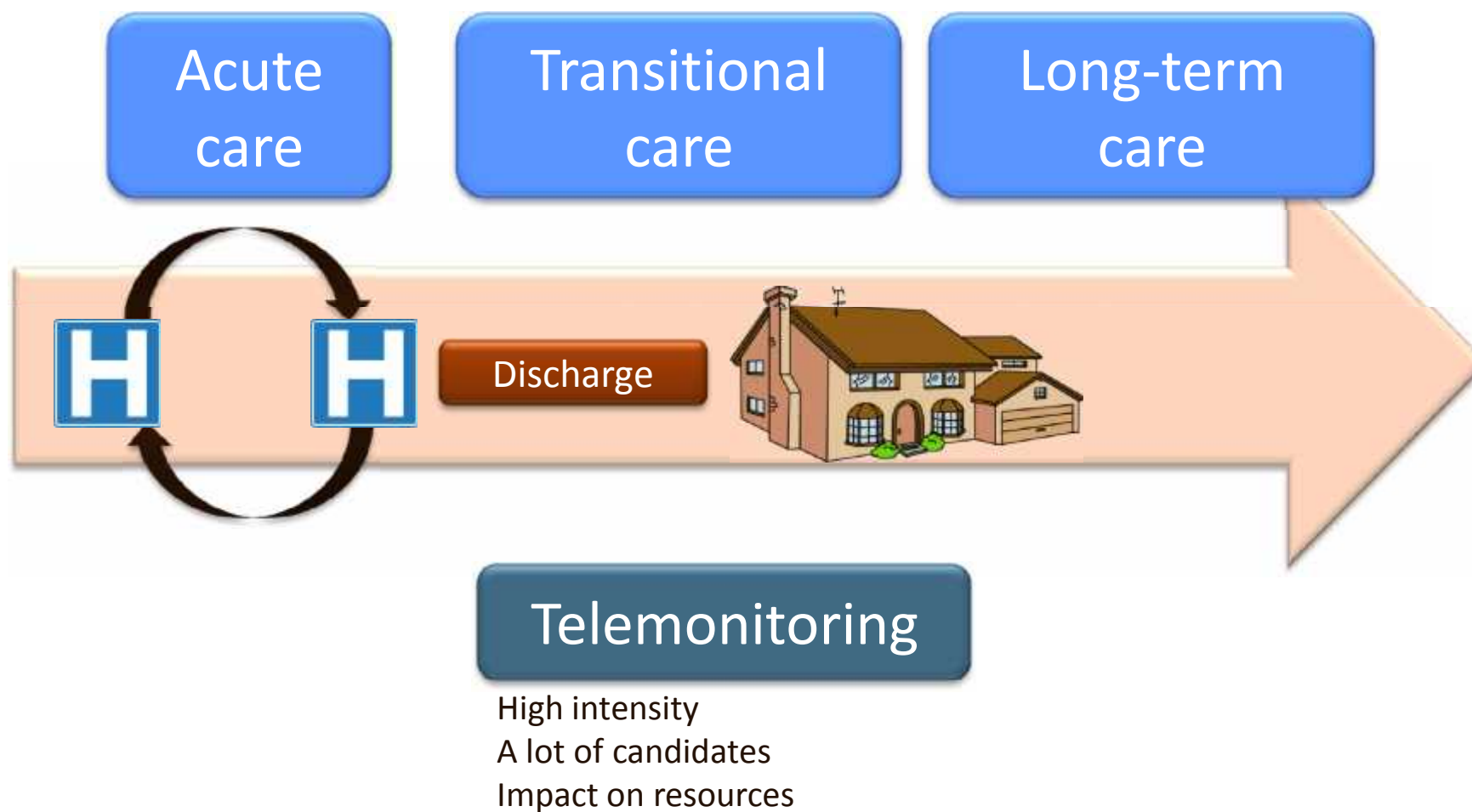
Nowadays, the **22% of stroke patients** in Catalunya may **benefit** from the TeleStroke Network.



Evolution of hospitals with TeleStroke in Catalonia



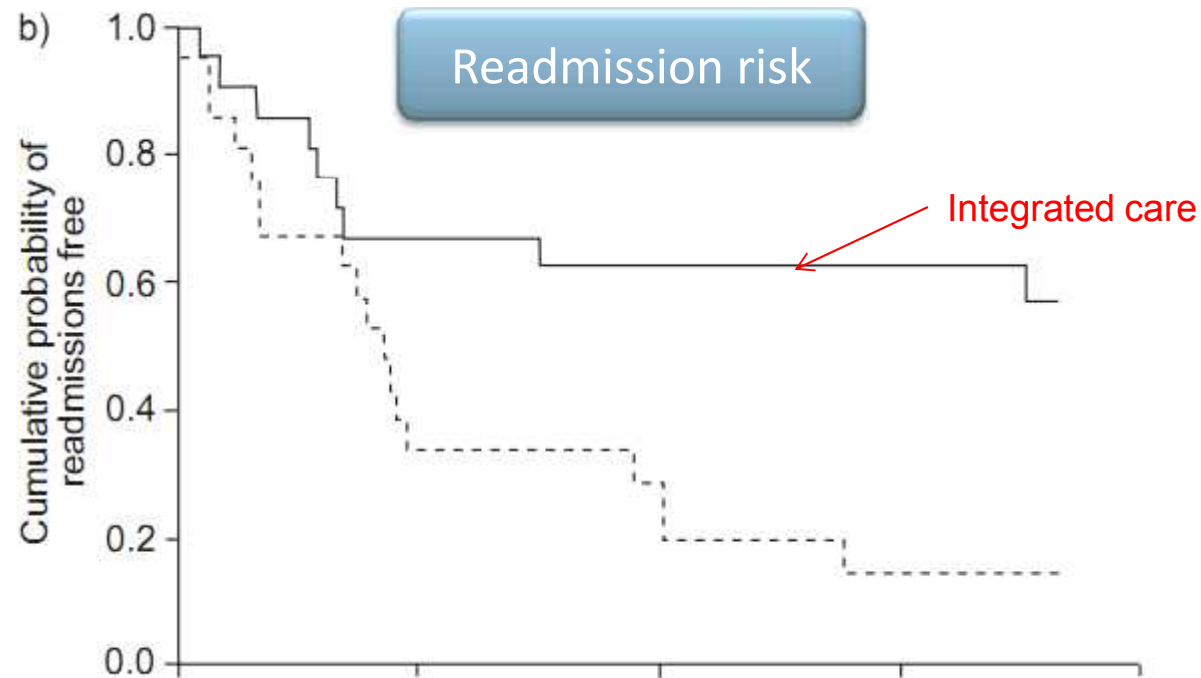
From acute to long-term care



Integrated care prevents hospitalisations for exacerbations in COPD patients

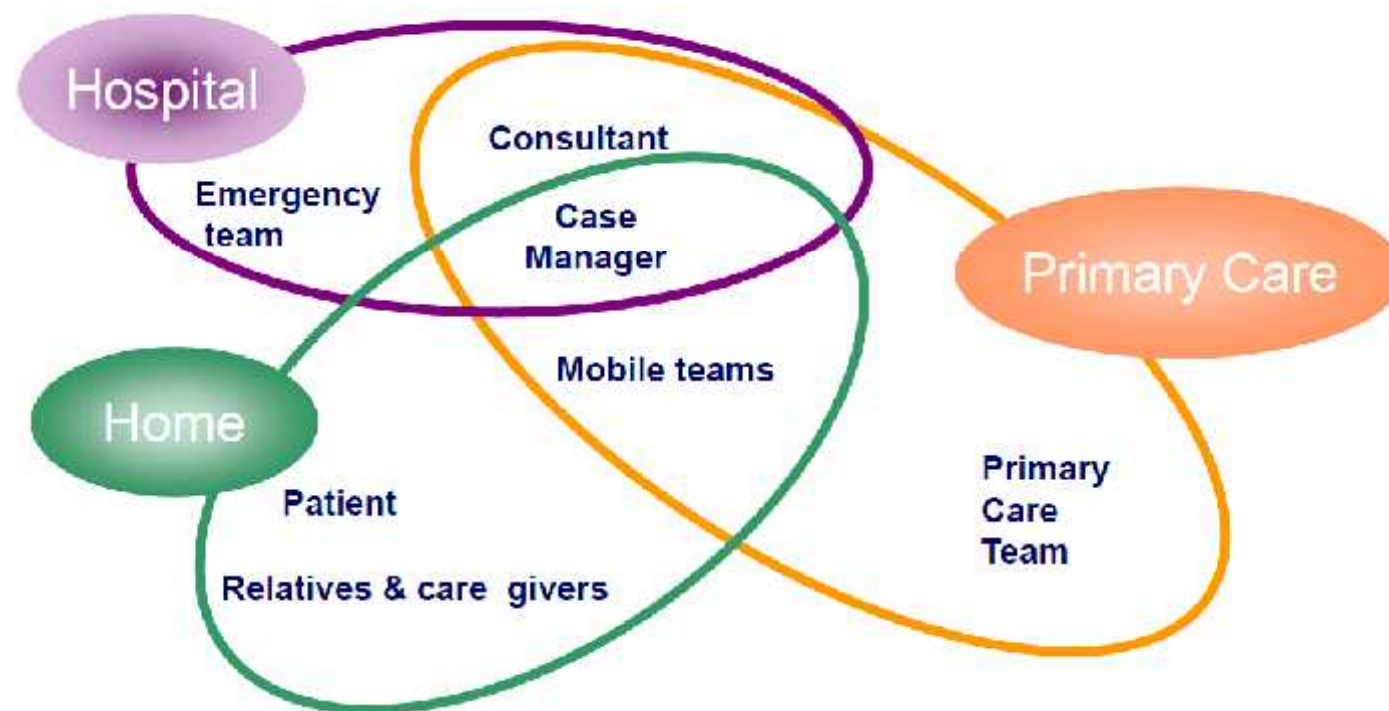
A. Casas*, T. Troosters[†], J. García-Aymerich[#], J. Roca*, C. Hernández*, A. Alonso*, F. del Pozo[†], P. de Toledo[†], J.M. Antó[#], R. Rodríguez-Roisin*, M. Decramer and members of the CHRONIC Project

Eur Respir J 2006; 28: 123–130



Adaptation of health services to chronic patients

shared care arrangements across the system



Renewing Health

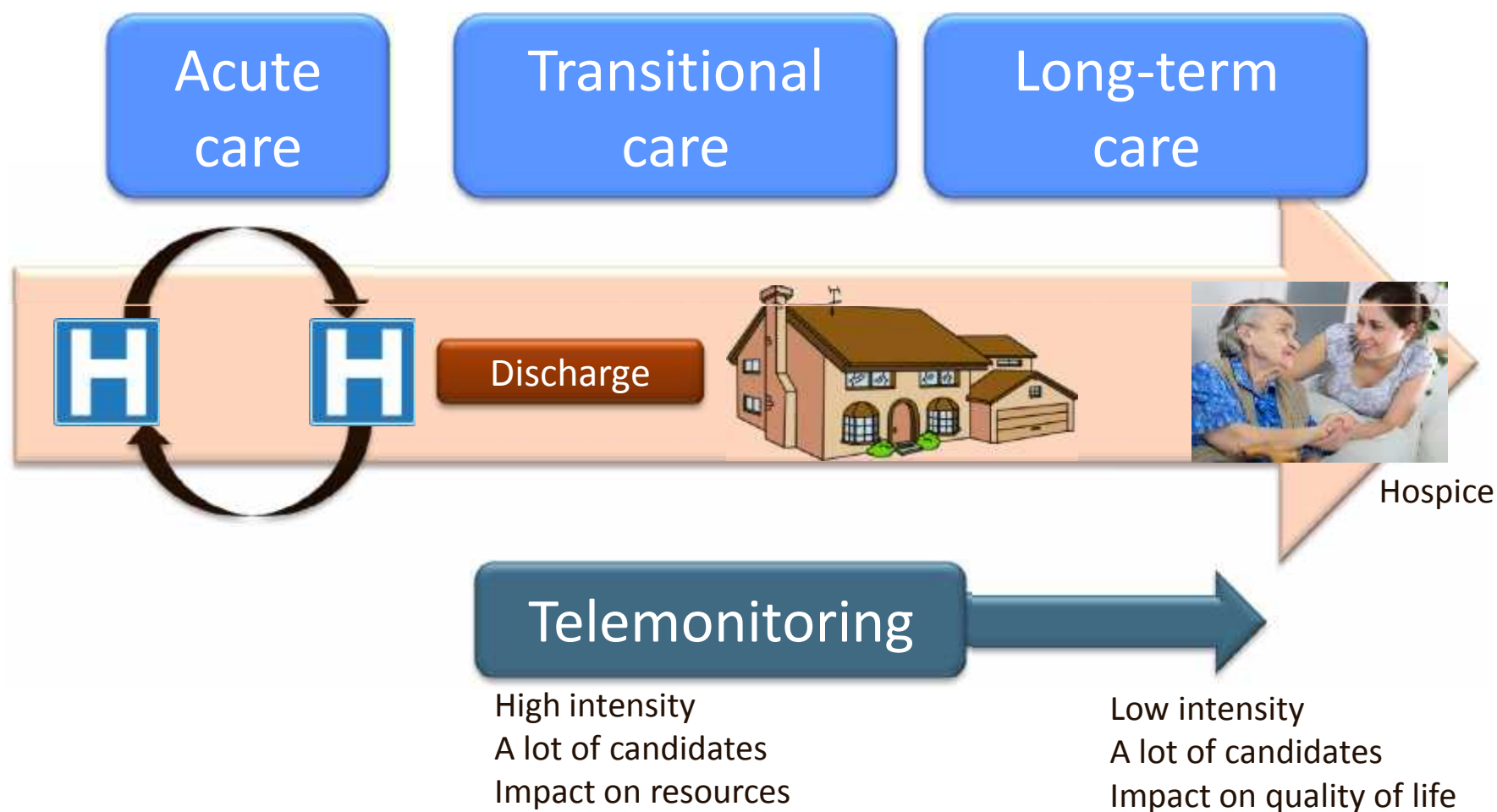


Innovative telemedicine services
using a patient-centred approach



Transitional care
Discharge planning
Reduce readmissions

From acute to long-term care



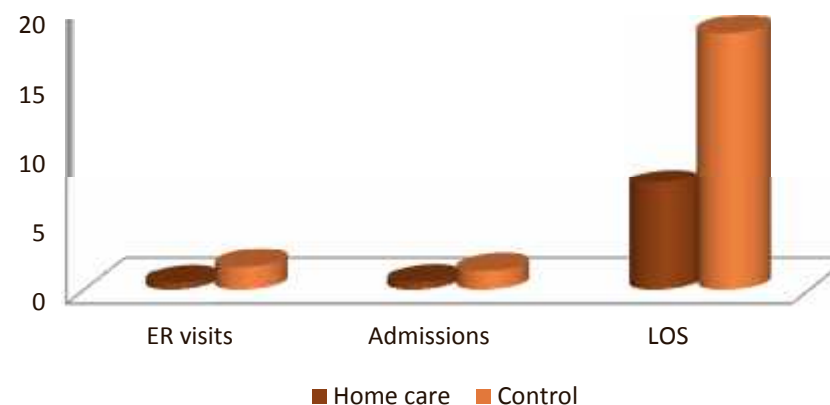
Long-term follow up by specialists in LTOT

Impact of a Hospital-Based Home-Care Program on the Management of COPD Patients Receiving Long-term Oxygen Therapy*

*Eva Ferrero, MD; Joan Escarabill, MD, FCCP; Enric Prats, MD;
Marian Maderal, NU; and Federic Manresa, MD*

[Chest 2001; 119:364-369](#)

Changes related to home care

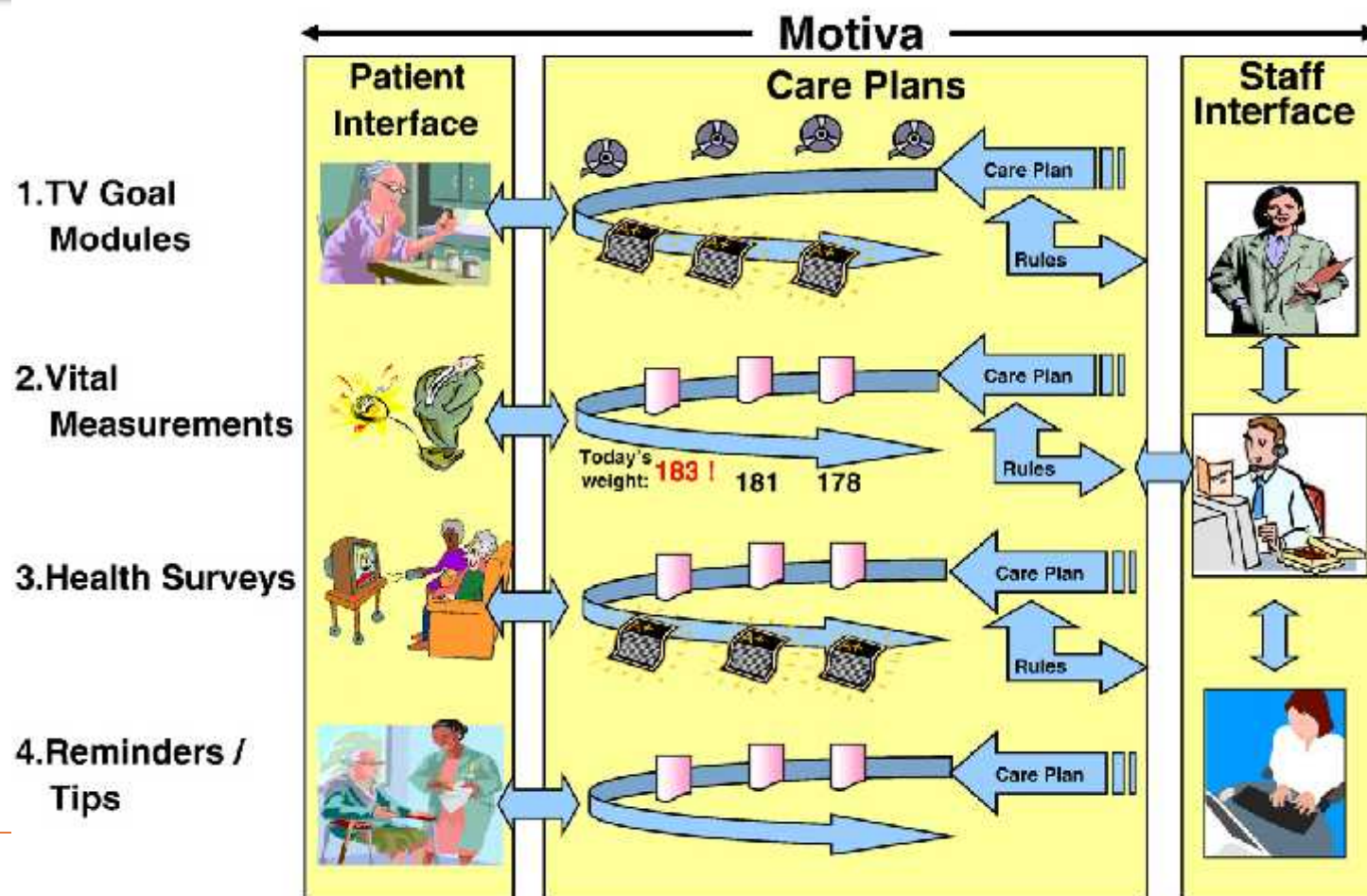


Positive impact of
nurse/respiratory therapist +
telephone + home visit

Evaluation of a telemedicine system for heart failure patients: Feasibility, acceptance rate, satisfaction and changes in patient behavior
Results from the CARME (Catalan Remote Management Evaluation) study

Mar Domingo^{a,b,c}, Josep Lupón^{a,d,*}, Beatriz González^a, Eva Crespo^a, Raül López^a, Anna Ramos^a, Agustín Urrutia^{a,d}, Guillem Pera^u, José M^a. Verdú^{d,e}, and Antoni Bayes-Genis^{a,d}

Eur J Cardiovasc Nurs. 2011 Mar 12. [Epub ahead of print]



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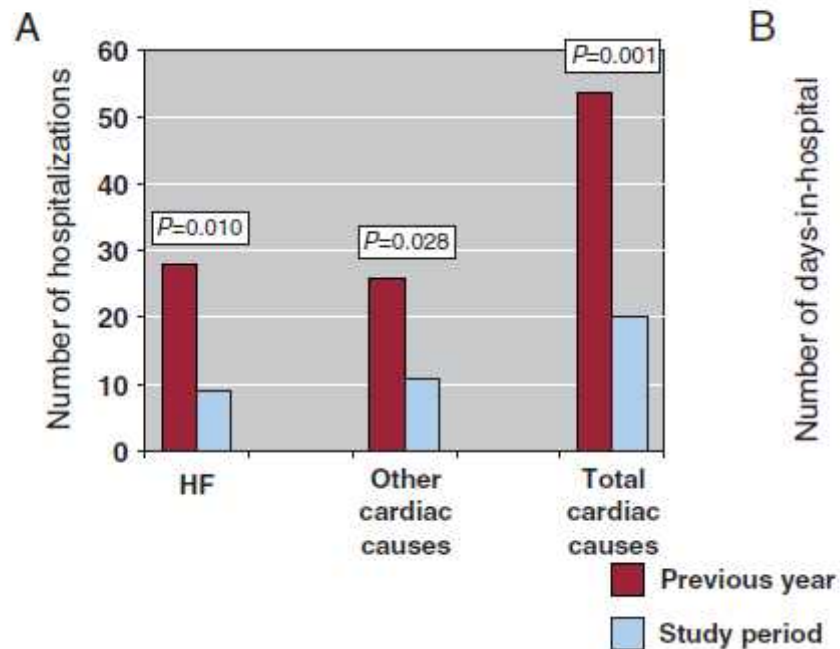


Noninvasive Remote Telemonitoring for Ambulatory Patients With Heart Failure:
Effect on Number of Hospitalizations, Days in Hospital, and Quality of Life.
CARME (Catalan Remote Management Evaluation) Study

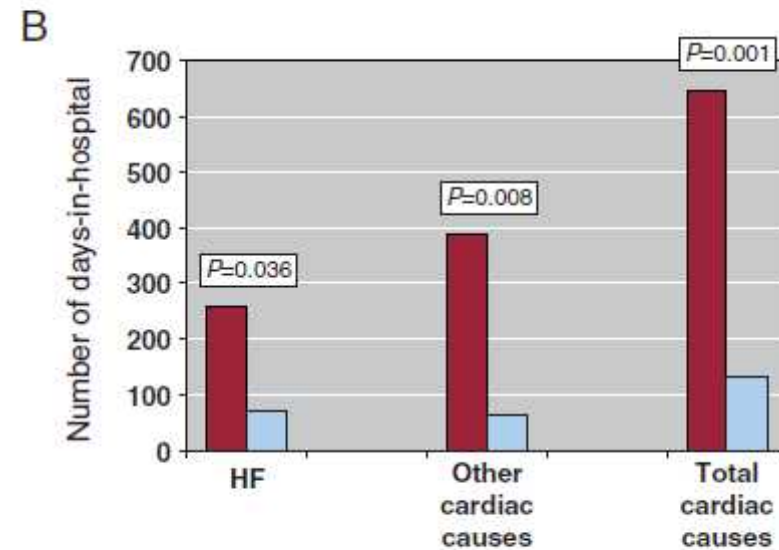
Mar Domingo,^{a,b,c} Josep Lupón,^{a,d,e} Beatriz González,^a Eva Crespo,^a Raúl López,^a Anna Ramos,^a
Agustín Urrutia,^{a,d} Guillem Pera,^e José M. Verdú,^{d,e} and Antoni Bayes-Genis^{a,d}

Rev Esp Cardiol. 2011;64:277-85

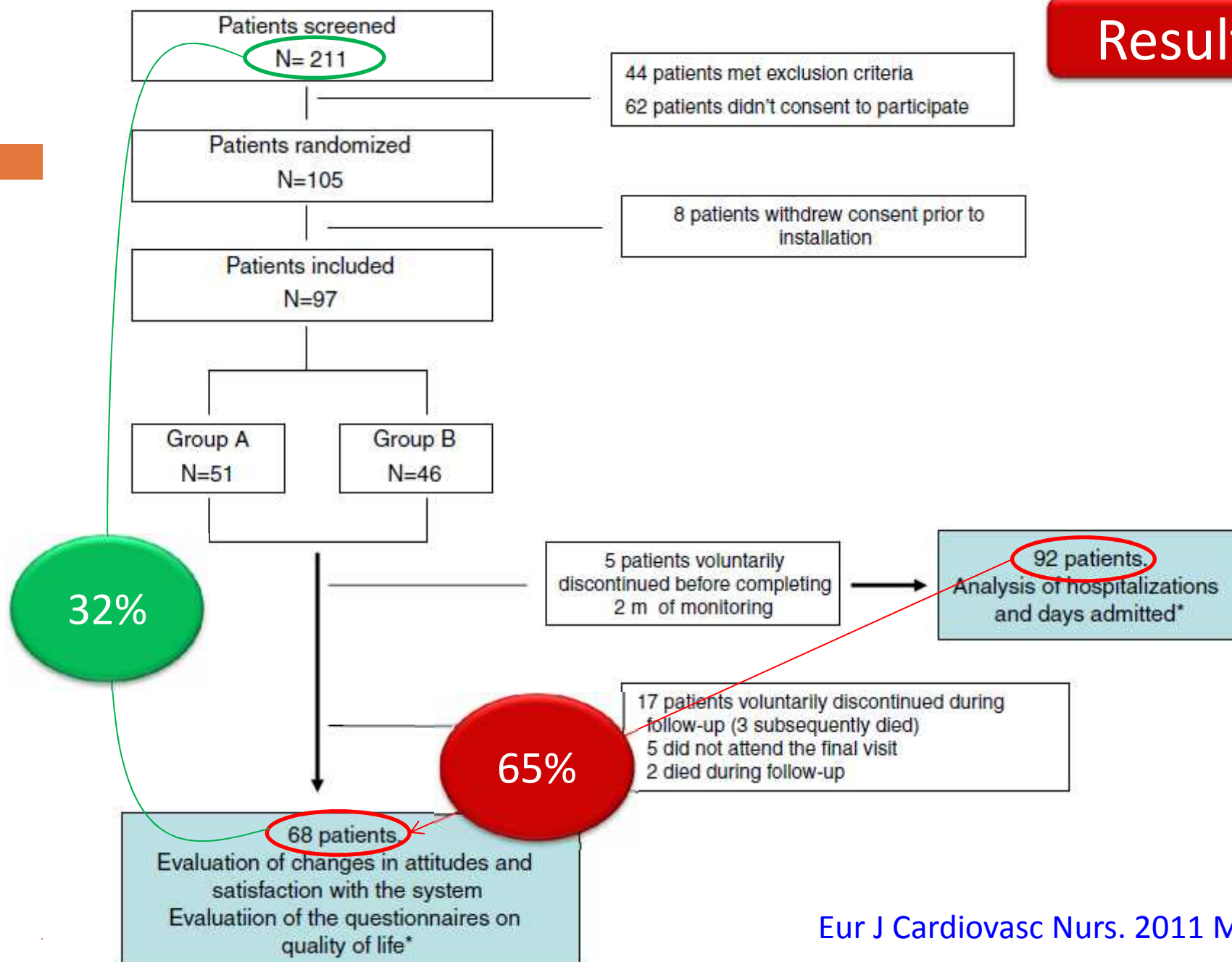
Admissions



Days in hospital



Results



Telemonitoring: Lights and shadows

Benefits

Serve more patients

Save time

Contacts increases

Limitations

Not for all patients

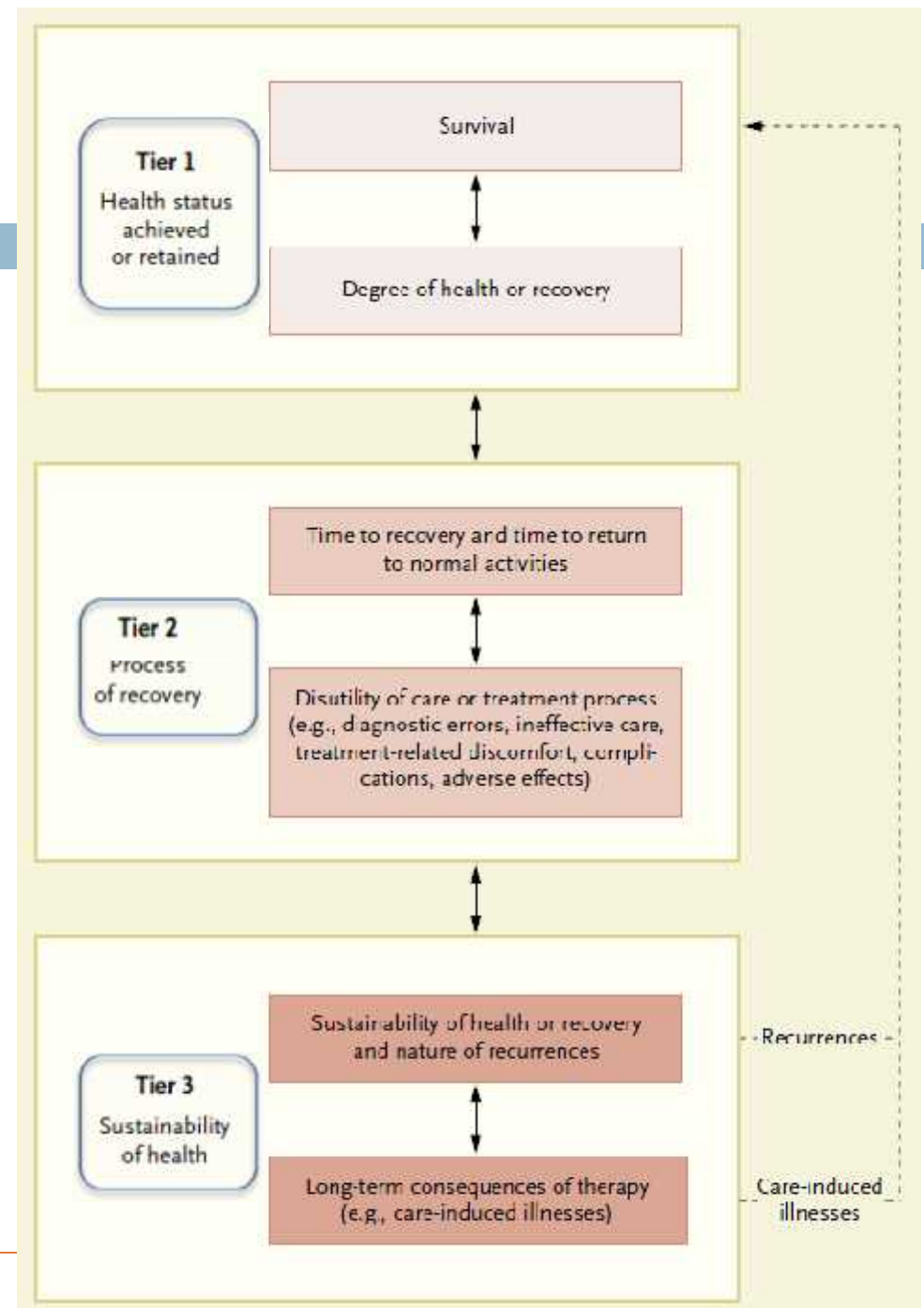
Not in all circumstances

Evaluation

The Outcome Measures Hierarchy



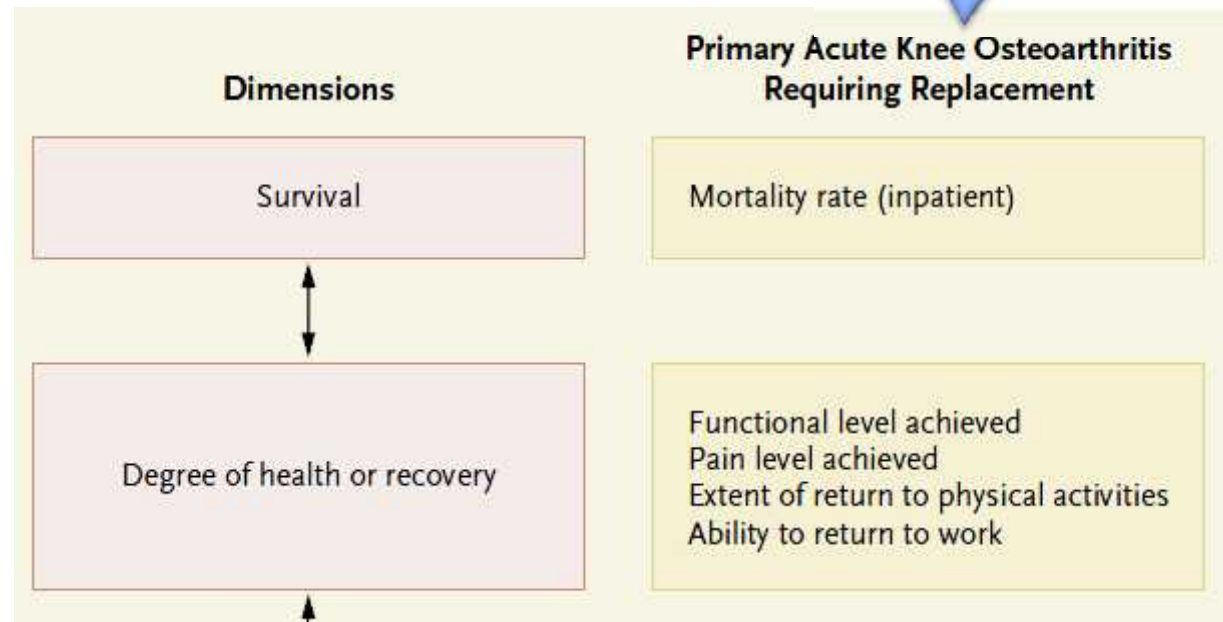
Porter EM. NEJM 2010;363:2477-81



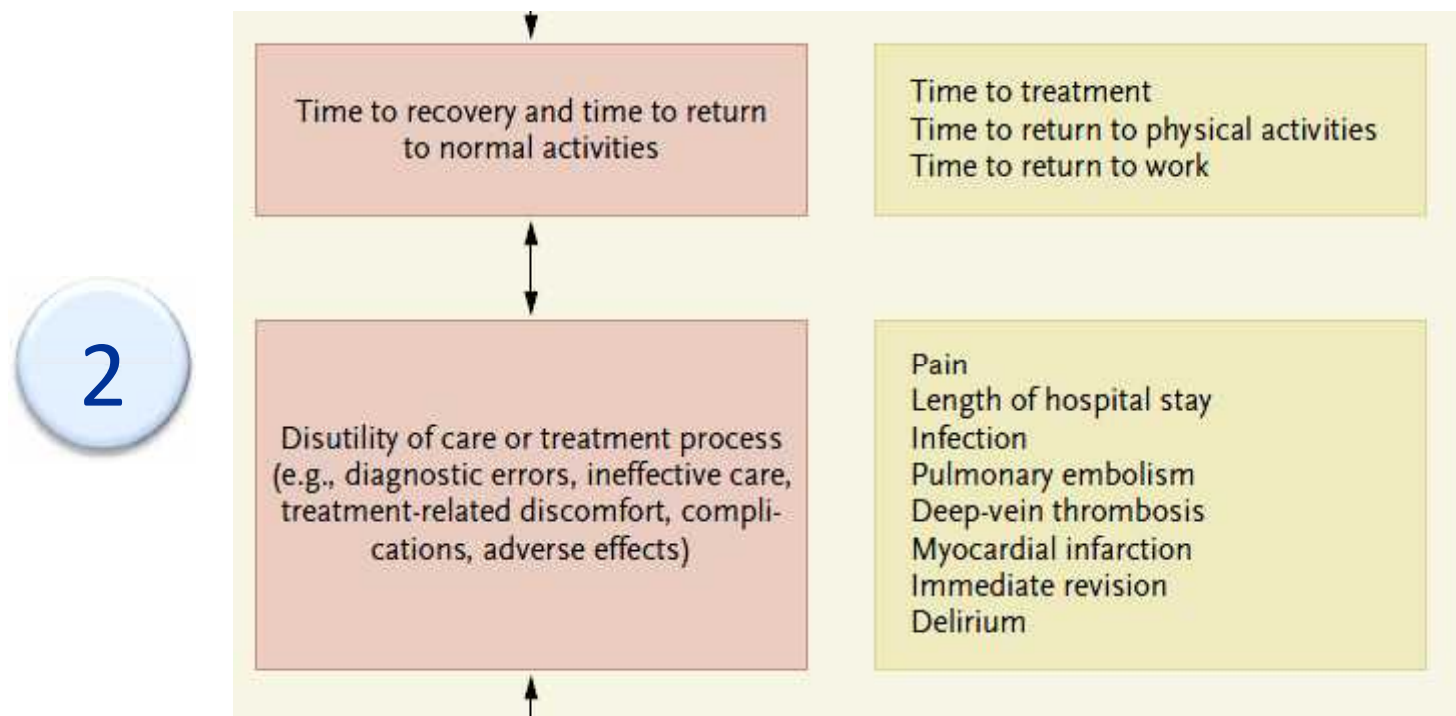
The Outcome Measures Hierarchy

Imagine that the
example is COPD

1

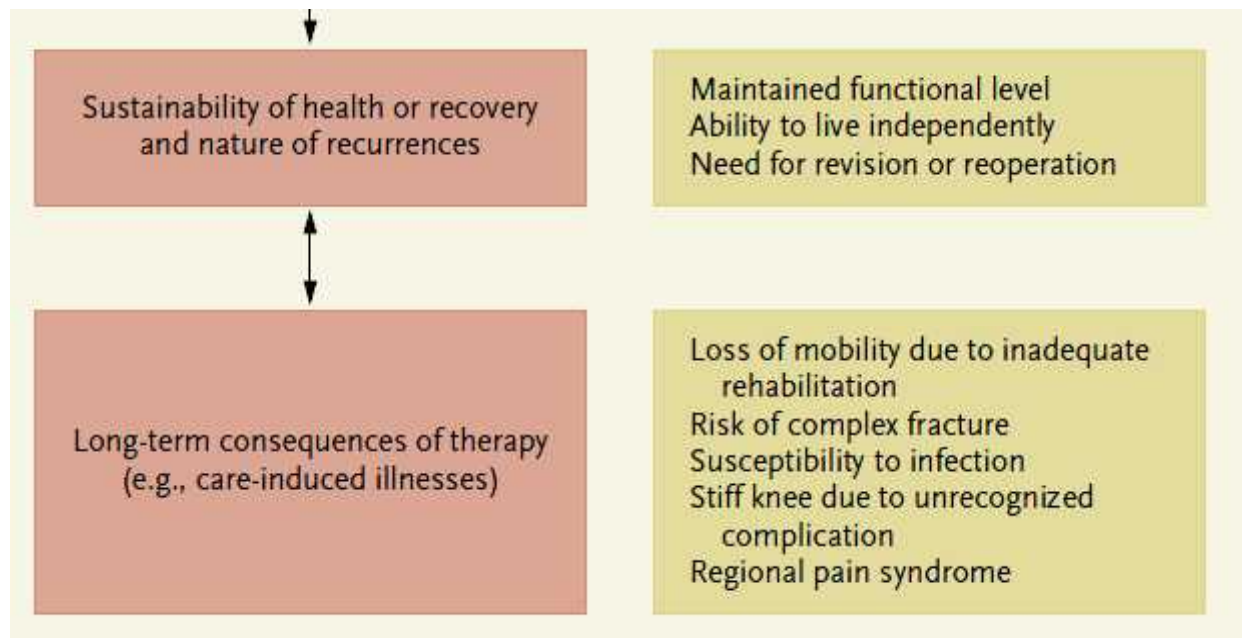


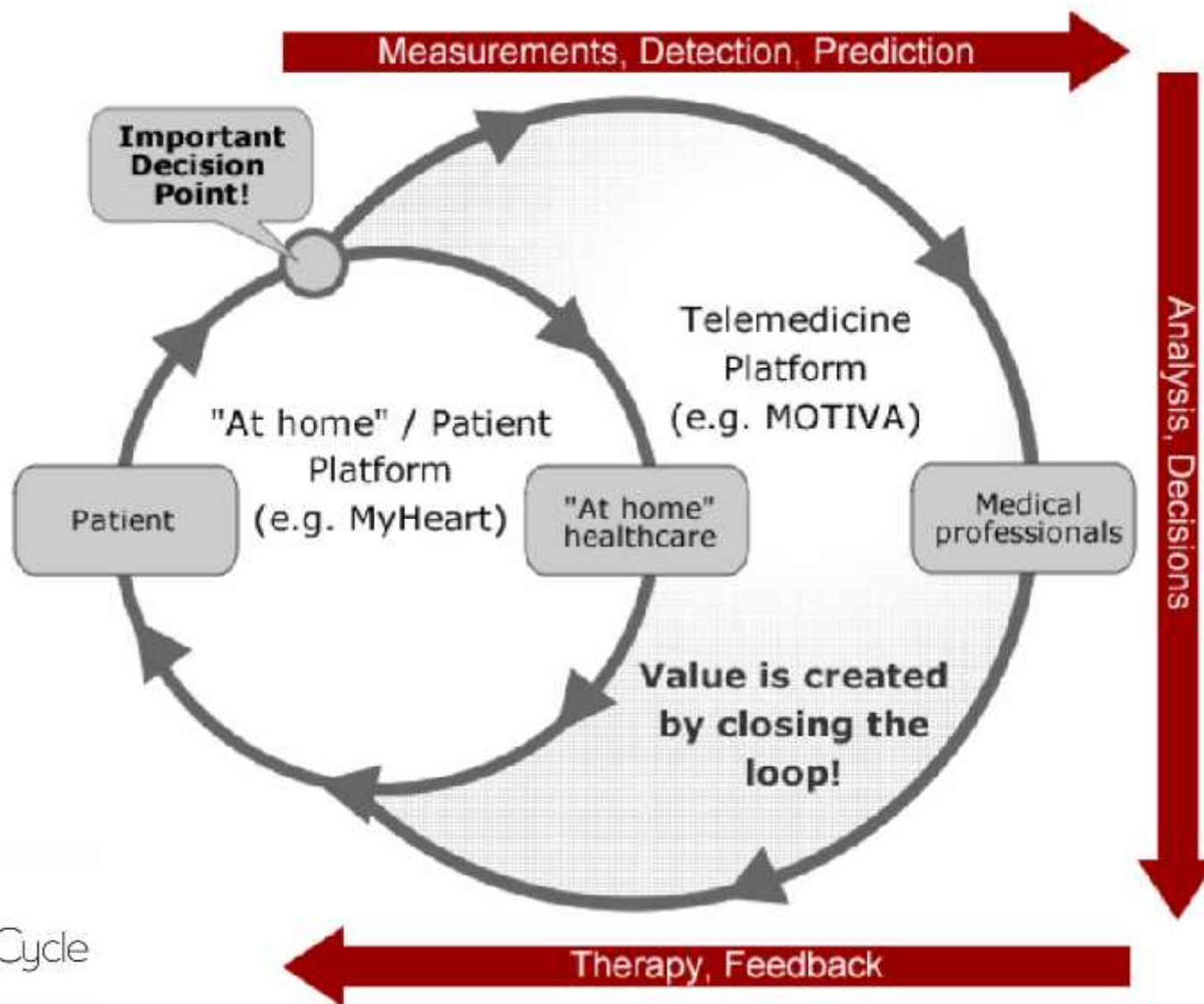
The Outcome Measures Hierarchy



The Outcome Measures Hierarchy

3







REVIEW

TELEMONITORING IN PATIENTS WITH CHRONIC RESPIRATORY DISEASES: LIGHTS AND SHADOWS

Joan Escarrabill

ERS Buyer's Guide (in press)

TABLE 1. Services related to telemonitoring

Ability to share health data between professionals

Call centre that coordinates the connection between the patient and different health professionals

Direct patient access to health professionals (according a specific protocol)

E-mail

Telephone access

Ability to telemonitor vital signs (lung function, pulse oximetry, blood pressure or blood glucose, etc.)

Possibility of virtual teleconsultation

Access to educational tools for the patient

Facility for the patient to have the ability to access to their care plan (medication, settings of the medical devices available at home, etc.)

Mechanisms to generate alerts or reminders

▶ Twenty years of telemedicine in chronic disease management – an evidence synthesis

Richard Wootton

Norwegian Centre for Integrated Care and Telemedicine, Tromsø, Norway

[Journal of Telemedicine and Telecare 2012; 18: 211–220](#)

Conclusion

The evidence base for the value of telemedicine in managing chronic diseases is on the whole weak and contradictory.

Home mechanical ventilation

National registries are needed to reduce variations in care and improve patient safety

Matt P Wise *consultant in adult critical care*¹, Nicholas Hart *chairman*², Craig Davidson *clinical lead for home mechanical ventilation*³, Rik Fox *clinical lead for home mechanical ventilation*⁴, Martin Allen *clinical lead for home mechanical ventilation*⁵, Mark Elliott *clinical lead for home mechanical ventilation*⁶, Bob Winter *president*⁷, Mike Morgan *chairman*⁸, Helena Shovelton *chief executive*⁹, Robert Meadowcroft *chief executive*¹⁰, Jane Campbell *independent cross-bench peer*¹¹, Ilora Finlay *president*¹²

[BMJ 2011;342:d1687](#)

Appropriate package of care for individual patients at a local level

Thank you very much for your attention!!!



Casa Batlló. (Antoni Gaudí, 1906)