Outcomes of physical autonomy in Post Acute and Long Term Care

National Network for Integrated Continuous Care Portugal – RNCCI
National Coordination - Mission Unit for Integrated Continuous Care
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Background

The use of an integrated tool for bio-psychosocial evaluation of users in need of post acute and long term care and their outcomes registered on a paper-free on-line web based system of data management allows the continuous process of results' assessment. It allows real time results at a national, regional, local, and unit level, making benchmarking possible to obtain with a large number of registries.

Although the individual aspects of health and social care services for people who depend on continuous support are now an area of extensive research in many countries, the concepts, indicators and models for international comparisons and for the identification of good practice across countries are still very much in their infancy. Even at a national level, methodology and measurement is often deficient to bring these aspects or elements together *(Health systems and long-term care for older people in Europe, 2008)*.

The National Network for Integrated Continuous Care (RNCCI) has different levels of care – inpatient units, ambulatory care and integrated home care, based on partnerships of the public, private and third sector in care. Integrated home care began its implementation in 2009 and inpatient units in 2007. Ambulatory care within RNCCI for stroke rehabilitation and dementia care will be implemented at the end of 2010.

A paper-free on-line web based system of data management for the network was developed. Its implementation began in the first trimester of 2008 on a voluntary basis with continuous engagement of professionals, for inpatient units. This implementation and methodology began in 2009 for integrated home care that will allow consistent data for physical autonomy at the end of 2010.

There are four different types of inpatient units: Convalescence, for expected 30 days recovery, Midterm Rehabilitation (UMDR), for expected 90 days recovery, Long Term Maintenance (ULDM) that aims avoid deterioration and Palliative care.

Objectives

To characterize the degree of physical autonomy on admission and discharge of the users of the National Network for Continuous Integrated Care (RNCCI) as well as characterize their age group during 2009.

Methods

Analyze the reports on the on-line web based system, related to age groups of users and their degree of autonomy. The bio-psychosocial evaluation tool, related to physical autonomy has four degrees related to scores obtained: Incapacity, dependent, autonomous and independent.

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Results

Related to age distribution, the data management system allowed to identify that in 2009, 80,5% of the referrals to the RNCCI, concern users aged 65 or more and 42% are aged 80 or more. In this age group, 26% were females and 16% males.

Pertaining to physical autonomy, it was evaluated a sample of 5.784 registries for admission and the same number on discharge, in a universe of 12.850 discharges.

The results obtained with this sample have a 95% confidence interval, with 1% confidence limit.

It was observed a 27% decrease of incapacity, 16% decrease in dependents, an increase of 312% of autonomous and 393% increase of independents. The number of users that improved is 2.294 (negative variations in incapacity and dependents reflect improvement), representing 40% of users, as shown in table 1 and figure1.

	Admission	Discharge	Change	Change
incapacity	2461	1786	-27%	-675
dependent	2985	2513	-16%	-472
autonomous	225	928	312%	703
independent	113	557	393%	444
Total	5784	5784		2294

Table 1

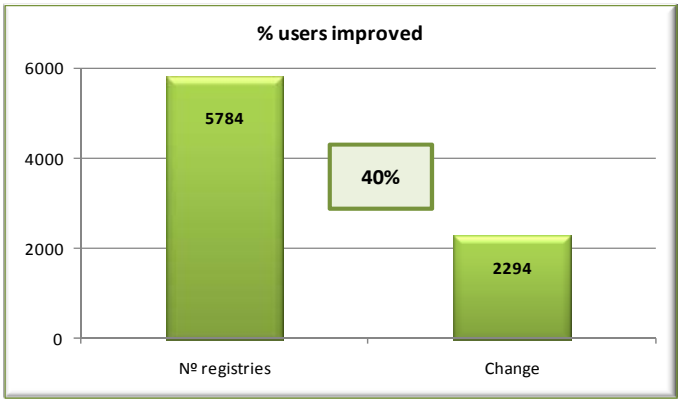

Figure 1

These results are obtained in a population of users that on admission 43% have incapacity and 52% were dependents, representing 94% of the users.

When analysing Convalescence showed a 37% decrease of incapacity, 25% decrease in dependents, an increase of 267% of autonomous and 399% increase of independents. The number of users that improved is 1.674, representing 53% of users, as shown in table 2 and figure2.

Autonomy Convalescence Units				
	Admission	**Discharge**	**Change**	**Change**
incapacity	983	617	-37%	-366
dependent	1878	1407	-25%	-471
autonomous	182	668	267%	486
independent	88	439	399%	351
Total	3131	3131		1674

Table 2

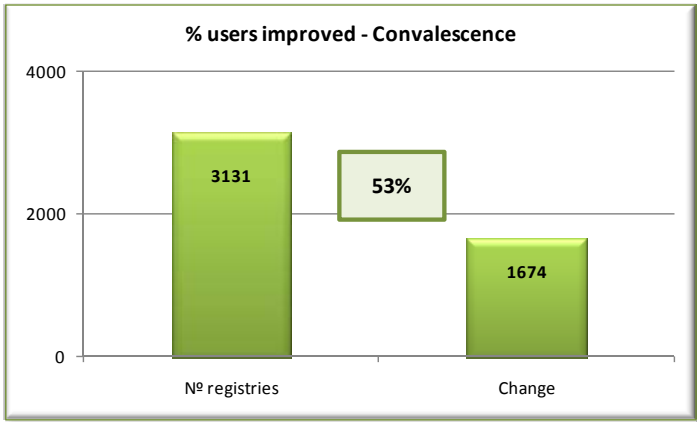

Figure 2

On admission, 91% of the users have incapacity or were dependent.

For Midterm Rehabilitation (UMDR) it was observed a 28% decrease of incapacity, 1% decrease in dependents, an increase of 500% of autonomous and 458% increase of independents. The number of users that improved is 554, representing 29% of users, as shown in table 3 and figure 3.

Autonomy UMDR				
	Admission	**Discharge**	**Change**	**Change**
incapacity	962	694	-28%	-268
dependent	874	865	-1%	-9
autonomous	38	228	500%	190
independent	19	106	458%	87
Total	1893	1893		554

Table 3

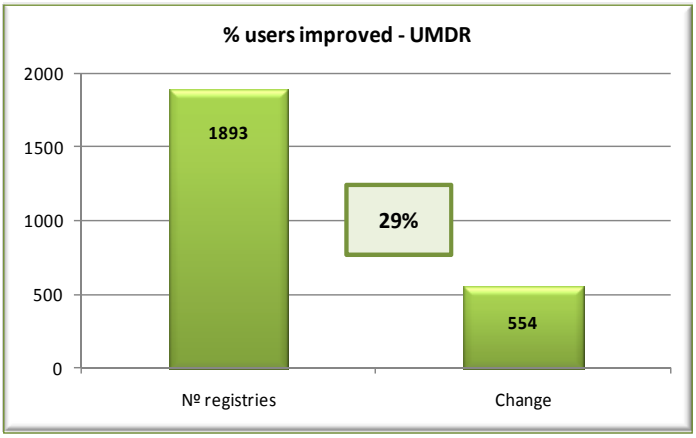

Figure 3

On admission, 97% of the users have incapacity or were dependent.

For Long Term Maintenance (ULDM) that only aims avoid deterioration, on admission, 99% of the users have incapacity or were dependent, but it was possible to improve 11% of users.

This analysis is also made for benchmarking between carers, data that is sent to the clinical audits teams to allow them to analyse data and program specific audits if there are significantly differences between outcomes, beyond those who are made on a regularly basis.

Discussion

Evaluating outcomes must consider the differences in age groups, level of autonomy in each age group as well as diagnosis and co-morbidities. The data allows having information about global performance of the RNCCI. Our policy of continuous quality improvement includes annual organizational and clinical audits, to all levels of care. Benchmarking among carers must take in account the differences cited above. It is also important that in a situation where a clinical decline is expected, a stable "IAI" quotation could mean a good evolution related to the intervention in course.

Heinemann refers that comparing outcomes across post acute settings has been hampered by the lack of a common outcome assessment instrument across settings and that there is absence of scientific evidence and a way to compare outcomes across settings. Post acute rehabilitation care is a key component of the health care delivery system, yet we know little about the active ingredients of the rehabilitation process that produce the best outcomes. Critical research needs include developing validated measures, standardizing measures and timing of routine measurement and quality assurance purposes across sites of care, examining differences in content and processes of care both within facilities of the same type and across types of facilities, identifying patient characteristics that vary by region, cultural characteristics, and referral patterns and implementing a ''strategic plan for effectiveness research'' that is characterized by collaboration between health authorities, researchers, and care sites

(Heinemann AW, 2007). The ongoing processes in RNCCI attempt to contribute to these remarks.

The European Silver Paper on the Future of Health Promotion and Preventive Actions, Basic Research, and Clinical Aspects of Age-Related Disease *(Cruz-Jentoft AJ et al, 2008)* refers that Each European country should develop a full spectrum of high quality services for older people, which includes health care (both in- and outpatient, acute and chronic), home care and care homes, and make them financially sustainable, available and accessible to all those in need. Older people should receive a comprehensive assessment to determine the need for long-term care and the possibility of recovering enough function to live in a less complex environment. This needs assessment should lead to appropriate investigation, treatment and support, using a bio-psycho-socio spiritual model. The integrated tool used in RNCCI follows this recommendation.

The National Institute of Administration *(Rato, H., Rodrigues, M. 2009)* performed a study to characterize the users of the National Network for Integrated Continuous Care (RNCCI) with data gathered in 2008 refers that in some dimensions of analysis – health complaints, locomotion and physical autonomy – classification is made based on the lowest score. Using the lowest score results in biased outcomes, since there is a tendency to produce more negative results. They recommend the use of a method of analysis based on medium scores for the parameters cited above. As such, the results obtained for physical autonomy may be biased negatively. We are now analysing in a sample what would be the results for physical autonomy following these recommendations. Since the online web based system of data management is built according the initial premises, which is after an episode of care/evaluation registered the system calculates the score and allocates to one of the four levels of autonomy, this data must be analysed with individual records to calculate the new scores and compare them with the initial evaluation.

Haley et al refer that, efforts to evaluate the effectiveness of a broad range of post acute care services have been hindered by the lack of conceptually sound and comprehensive measures of outcomes. A variety of outcome instruments are currently in use in post acute care that have been developed for defined patient populations and/or specific clinical settings. The World Health Organization's International Classification of Functioning, Disability and Health (ICF) provide a conceptual framework and classification system for developing comprehensive outcome instruments for post acute care. An initial step in using the ICF to guide outcomes assessment is to determine the major domains of activity that are most critical to postacute care services, and to develop a pool of activity items to examine each activity domain. *(Haley SM at al, 2004).*
The construction of an integrated evaluation tool, with ICF for physical autonomy, needs development and validation for postacute and long term care. We are aiming this evolution but with the international recommendations, this should be done with international partnerships, to obtain an instrument that will allow international benchmark of outcomes.

Conclusion/Application to practice

This ongoing monitoring allows the implementation of a continuous improvement policy and allows carers to be engaged on performance management and benchmarking between them. This data management system allows obtaining a large number of registries for analysis otherwise only possible in prospective or retrospective studies specifically designed for this purpose.

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