

# Impact of the implementation of a health network of multidisciplinary care for patients with chronic heart failure: analysis of the benefits after 5 years

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## Purpose:

- The Cardiosaintonge network offers to patients with chronic heart failure multidisciplinary coordinating care involving general practitioner, cardiologist, nurse, physical therapist, dietician, chosen by the patients as therapists, as well as the network chief pharmacist and the network cardiologist as coordinators. The network also organises frequent courses dedicated to the management of heart failure.
- This team insures the patient the network medical program: therapeutic and nutritional education, as well as psycho-social accompaniment and multidisciplinary coordinating care.
- The efficiency of this action was evaluated by checking of the number of hospitalization days for network group patients vs those of non network group patients and the analysis of survival curve and Duke Health Score for network group patients. It was also estimated by a questionnaire to the network actors.

## Methods:

- The number of days of hospital re-admission for cardiac reasons was compared every year, on the same geographical sector, with the same population of patients and professionals of health, for the network group patients, vs the non network group patients, with acute heart failure, but who refused the network program.
- The patients' quality of life was estimated by the analysis of their DUKE health Scores assessed at the inclusion of the patients in the network and regularly completed each six months (patient taken for its own witness).
- The cardiovascular mortality between the network patients and patients under standard conventional treatment was assessed during the follow up and analysed by Kaplan Meier survival curves
- Questionnaires of satisfaction to the network actors are regularly performed, on a drawn lots sample of network actors, in order to estimate the quality of the courses organised, and the quality of the circulation of information in the network, which is notably insured by the multidisciplinary phone conferences and the systematic use of a shared medical file.

## Results:

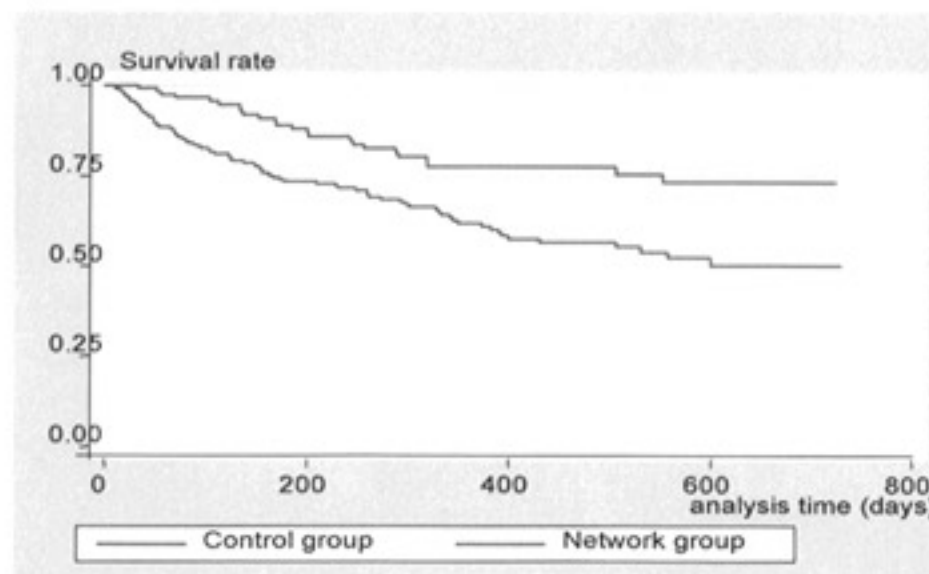
- Less hospital re-admissions (27 % vs 41 %) and shorter (14.4vs 19.4 days) for network patients.
- Longer survival and better quality of life on items anxiety and incapacity scores as well as on the scores of physical, mental, social and general perceived health.

## Results of the quality of life score comparison for patients in the network

Item	Baseline (D0) Median (IQI)	M12 Median (IQI)	p*	M24 Median (IQI)	p*
Physical Health	1300 (1200-1500)	1400 (1200-1600)	NS	1500 (1300-1700)	0.05
Mental Health	1600 (1400-1700)	1600 (1400-1800)	NS	1750 (1600-1900)	0.02
Social Health	1700 (1500-1800)	1600 (1500-1800)	NS	1650 (1600-1800)	NS
General Health	4503 (4303-4803)	4603 (4303-5203)	NS	4853 (4603-5303)	0.01
Perceived Health	300 (200-300)	300 (200-300)	NS	300 (300-400)	0.03
Self Esteem	1700 (1600-1800)	1700 (1600-1800)	NS	1700 (1600-1900)	0.05
Anxiety	1700 (1600-1900)	1600 (1400-1800)	0.02	1550 (1400-1700)	10 <sup>-3</sup>
Depression	1500 (1300-1600)	1400 (1200-1600)	NS	1300 (1100-1400)	0.02
Pain	300 (200-400)	300 (200-400)	NS	300 (200-400)	NS
Incapacity	300 (200-400)	200 (200-200)	10 <sup>-4</sup>	200 (200-200)	0.24

versus D0 (Day 0), IQI: Interquartile interval, NS non significant

## Kaplan Meier Survival curves (p<0.01)



- Network actors' satisfaction 80 % of the questioned general practitioners, 70 % of the nurses and 75 % of the other network actors noticed an improvement of the circulation of information between all the network actors. 51% of network actors attended specific courses organised by Cardiosaintonge. 54% to 97% of Network actors are satisfied or very satisfied of the pertinence and quality of courses and work insured by the network.

## Conclusion:

- Direct profits for the patients: better observance of therapeutics, better quality of life, detection of early signs of worsening heart failure, better autonomy and knowledge of their disease. This multidisciplinary network allowed reducing number of hospital re-admissions, and the hospital length of stay. This coordinating care permitted longer survival and avoided medicinal treatments.
- Direct profits for the network actors: This coordinating healthcare network improves communication, cooperation, recognition and appreciation between hospital and its external correspondents. The Network actors are regularly aware of the recommendations of the French and European Society of Cardiology, they attend specific continuing education
- Direct profits for the French health system:
  - Financial profits, because of the less hospital re-admission and treatments economies. The French Medical Insurances finance the Cardiosaintonge network each year from January 1<sup>st</sup> 2004
  - Technical profits, the network coordination is very helpful regarding to the lack of cardiologists in our rural areas. The pharmacist coordinator also allowed developing know-how transmissions and professional practices harmonization in routine by the clarification of new shared tools: mainly common protocols, shared medical file, professional practices' evaluation, drugs classification ...

These healthcare network and multidisciplinary organization contribute to significant benefits for patients, network actors, health system and medical insurances. This network as been chosen as one of the 5 referents for national healthcare networks evaluation in France.

## Bibliography:

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