

The HHH study

Discussant

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Home or Hospital in Heart failure

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Quality of Life and Management of Living Resources

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A multi-country randomised trial of the role of a new telemonitoring system in CHF: the HHH study (Home or Hospital in Heart Failure). Rational, study design and protocol

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Endpoints in design paper

Primary endpoints are as follows:

- bed-days occupancy for heart failure in acute medical/surgical beds (but excluding long-stay wards);
- composite measure of patient well-being (death, hospital bed days, symptom score and quality of life).

Secondary endpoints are:

1. bed-days occupancy for all cardiovascular reasons;
2. bed-days occupancy for all causes;
3. death (all causes);
4. changes in therapy;
5. costs of care and cost-utility;
6. patient satisfaction, self-care and disease knowledge assessment.

Endpoints

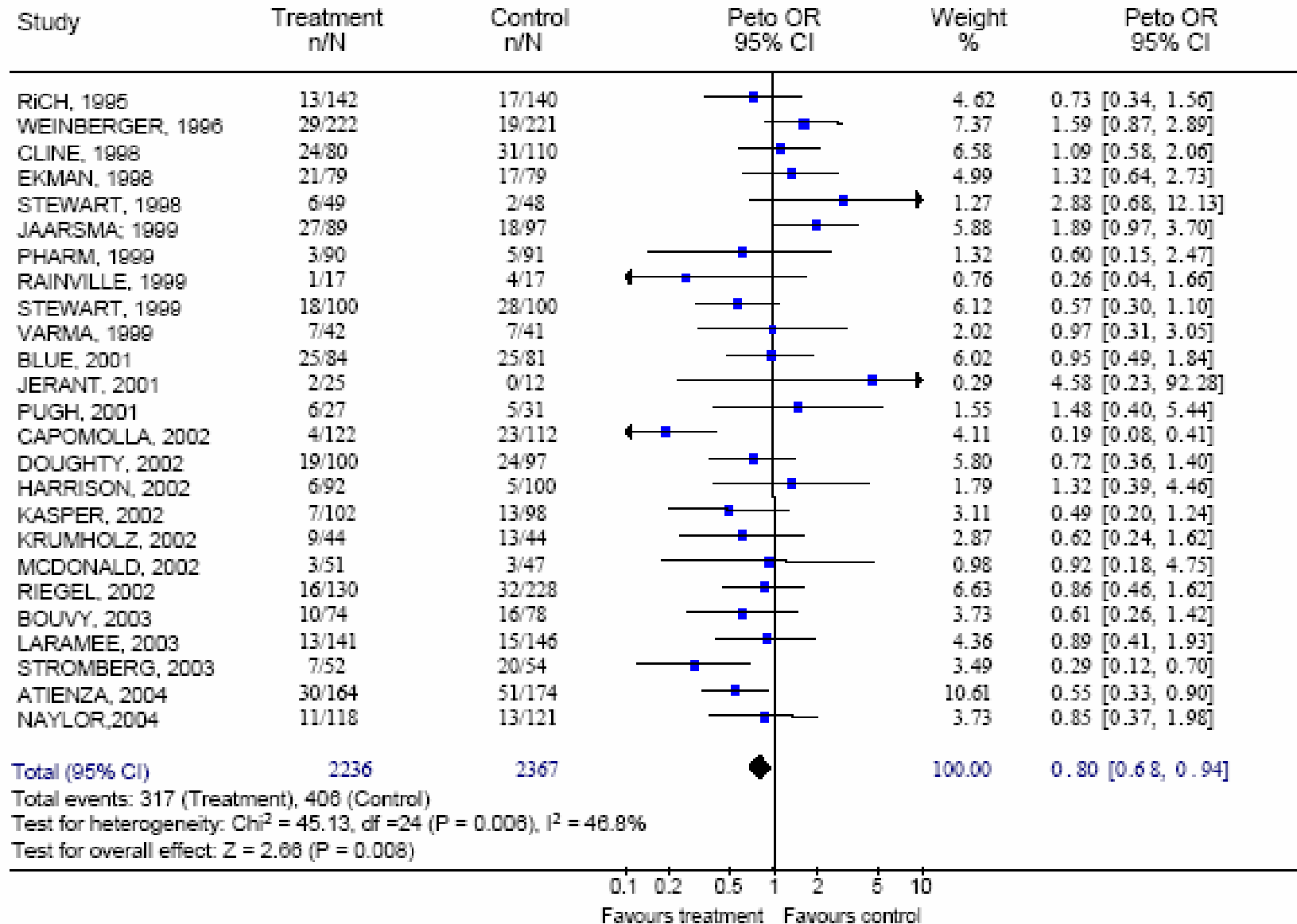
117 hospitalisations in 77 pts. In 29 pts ≥ 2 hospitalisations.

	Control N=160	Telemonitoring N=301
Number of pts hospitalised for HF	26 (16.3 %)	51 (16.9 %)
Number of days	?	?
Death or hosp.	30 (18.8%)	62 (20.6%)
Composite endpoint	?	?

HHH comments

- **Open, randomized study in highly selected younger pts (mean age 60 y) with CHF**
- **Excl. criterium : “Poor compliance in the management of telemonitoring system”**
- **Underpowered**
- **Main results neutral**
- **Several prespecified primary and secondary endpoints not reported**
- **Conclusions from subgroups (e.g. by country) should be avoided in this small study**

Rehospitalizations in DM studies



Heart Failure

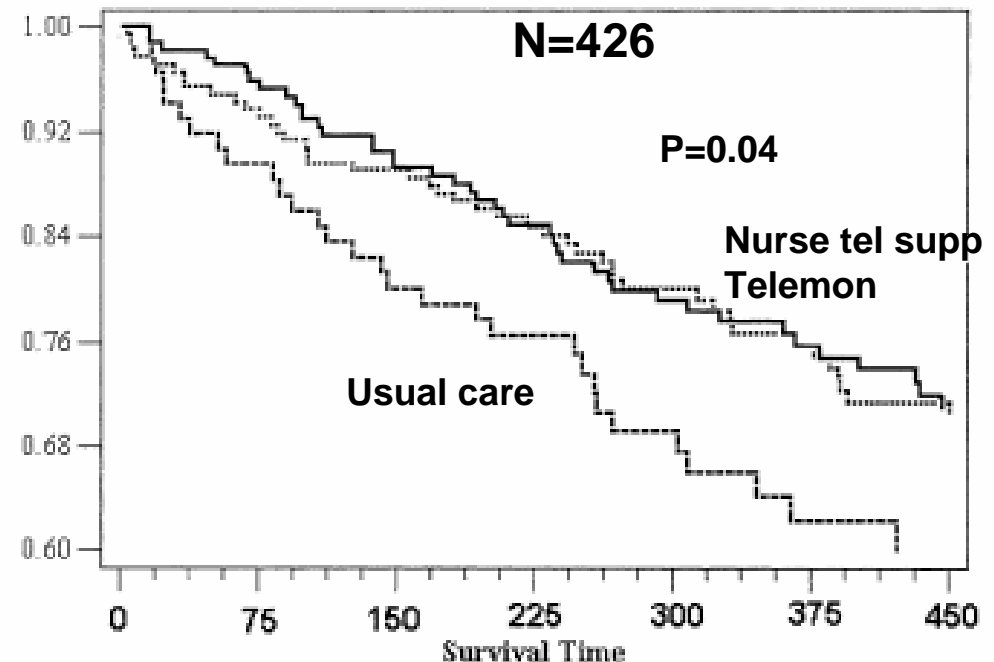
Noninvasive Home Telemonitoring for Patients With Heart Failure at High Risk of Recurrent Admission and Death

The Trans-European Network-Home-Care Management System (TEN-HMS) Study

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Survival Distribution Function



Follow-up at 450 days

- Days lost due to death

UC	8,137 (32.9%)
Tel supp	8,116 (16.4%)
Tel mon	8,841 (18.5%)

- Days dead or hospitalized

		Diff. between means (95% conf. interval)
UC	9,154 (37.0%)	+6 (-44 to +56)
Tel supp	10,539 (21.3%)	-65 (-4 to -125)
Tel mon	10,766 (22.6%)	-71 (-10 to -131)

Conclusions

- **“The HHH study is the largest study so far to assess the feasibility of home telemonitoring in chronic HF patients” is correct**
- **Based on this and other studies, homebased information may reduce outcomes**
- **Content of homebased telemonitoring needs further evaluation**