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ICD home monitoring cost compares, but reimbursement lags

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Roughly a decade since the start of telemonitoring capabilities in implantable cardiac defibrillators (ICDs), the first financial assessment of the impact of home monitored follow-up estimates the cost to physicians, hospitals and insurance providers is the same as traditional in-office monitoring, according to a new study.

But the European Health Economic Trial on Home Monitoring in ICD Therapy (EuroEco) identified wide European variations in the financial burden that physicians and hospitals face in switching to this approach, due to national differences in insurance reimbursement.

The findings suggest that reimbursement for Home Monitoring (HM) may be one of the key determinants of which countries move to adopt the practice.

"Since our study shows that total insurance costs do not increase, and Home Monitoring actually reduces hospitalisations and length of stay as seen in prior trials, we hope our results will allow informed discussions between payers, providers and manufacturers to come to balanced reimbursement scenarios in order to stimulate reorganisation towards remote monitoring-based care," said the study's principal investigator Hein Heidbuchel, MD, PhD, from the Heart Center Hasselt, Belgium.

EuroEco was presented as a Hot Line at the ESC Congress 2014 with simultaneous publication in the *European Heart Journal*.

The study was a randomized, non-blinded, parallel-design trial which included 17 centres from Belgium, Germany, Great Britain, Spain, and The Netherlands.

The main objective was to evaluate the cost to physicians and hospitals when relying on HM-based follow-up compared to in-office follow-up.

It included 303 patients (average age 62.4 years, 81% male) who were scheduled to receive a single- or dual-chamber ICD equipped with home monitoring (HM) technology.

After ICD placement, patients were randomized to HM ON (n=159) or HM OFF (n=144) and followed for two years. Over the study period patients in both groups had three mandatory in-office follow-up visits (6 weeks, and one and two years after discharge), with unscheduled visits, either physician- or patient-initiated, allowed at any time.

Patients in the HM OFF group also had routine in-office visits scheduled throughout the study, while those in the HM ON group were under continuous, automatic remote monitoring, with HM data analysis and alerts left to the investigators' discretion. A total of 242 patients completed the study as planned, with a mean follow-up period of 21.8 months. Premature discontinuation was mainly related to death.

Despite a significantly higher number of office visits that were unscheduled in the HM ON group compared to the HM OFF group, the total number of visits was still significantly lower for HM ON compared to HM OFF patients (3.79 vs. 5.53, p