

USE OF HOME TELEMONITORING SYSTEM IN HEMODIALYSIS PATIENTS AT HIGH RISK FOR VOLUME OVERLOAD.

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The care of hemodialysis (HD) patients (pts) can be complicated by hospitalizations for fluid overload and difficulty managing blood pressure (BP). Cardiocom® (CC) manufactures telehealth devices which allow central monitoring of blood pressure (BP), pulse, weight and oxygen saturation. In nondialysis pts with cardiomyopathy, the use of these devices has been shown to significantly reduce hospitalization.

The purpose of this 90 day pilot was to determine if the use of CC would reduce hospitalizations for fluid overload and/or improve BP in chronic maintenance HD patients with a history of excessive interdialytic weight gains (>5% EDW) or difficult to manage hypertension. 35 pts at 2 dialysis units received CC devices at home. Pts checked their vital signs, weight, and answered prompted questions twice daily on nondialysis days and once daily on dialysis days. A dialysis nurse, using a web-based program, contacted pts who met predetermined alert exception criteria.

27 pts were compliant with the telehealth devices. In the 90 days prior to the study, one patient experienced one hospitalization for volume overload. There was one hospitalization for volume overload during the study. 10 pts (37%) required 10 extra HD treatments to achieve new EDW. 6 pts (22%) required adjustment of BP medications due to home BP recordings, including one pt with bradycardia. Some pts benefited by reducing interdialytic weight gain via behavior modification and reinforcement. Overall, the telehealth devices were well received by pts, although some required home visits by staff and detailed one-on-one instruction. Others were excluded due to lack of telephone line.

In summary, in selected HD pts, home monitoring with CC can help optimize volume status and improve BP control. Limitations include pt compliance and cost. Due to frequent nursing assessment of in-center HD pts, similar benefits may be achieved in compliant dialysis patients using a home BP cuff and scale.