Should video monitors be used to detect night-time seizures in patients with epilepsy?

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Following a sudden death at a residential care unit, the Dutch Health and Care Inspectorate advised to intensify the use of video monitoring at the unit. Researchers now report that such video monitoring can help detect seizures at night, but the costs are high.

During a six month period comparing acoustic detection systems, bed motion sensors, and video monitoring, 1208 seizures were identified in 37 individuals; 393 seizures (33 percent) were only seen on video. In 169 of 1208 seizures (14 percent) an intervention was made, and this included 39 of 393 seizures (10 percent) only seen on video. The extra staff cost of monitoring was 7035 euro per seizure only seen on video and leading to an intervention.

"Nocturnal seizures may go unnoticed, especially in those living in a residential care facility who have frequent seizures and sleep alone. Video monitoring is particularly of help to detect tonic seizures but the majority of these events do not require an intervention," said Dr. Roland Thijs, senior author of the Epilepsia study. "The limited added value of video monitoring is outweighed by the high costs and considerations of privacy. We therefore encourage the development of novel less costly and less invasive devices."


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