

# Heart Center Documents 58% Decrease in Lead-Off Alarms using LifeSync® System

Florida Hospital Orlando

## Introduction:

Florida Hospital Orlando, the largest of seven hospitals in the Florida Hospital System, houses the Florida Hospital Cardiovascular Institute, ranked number three in the nation for number of open heart surgeries. Twenty-five thousand patients<sup>i</sup> are admitted into the Institute where 11,000 cardiac procedures<sup>ii</sup> and 2,000 open heart surgeries<sup>iii</sup> are performed annually. Since 1981, the Institute has performed more than 82,000 heart surgeries.<sup>iv</sup>

## Study:

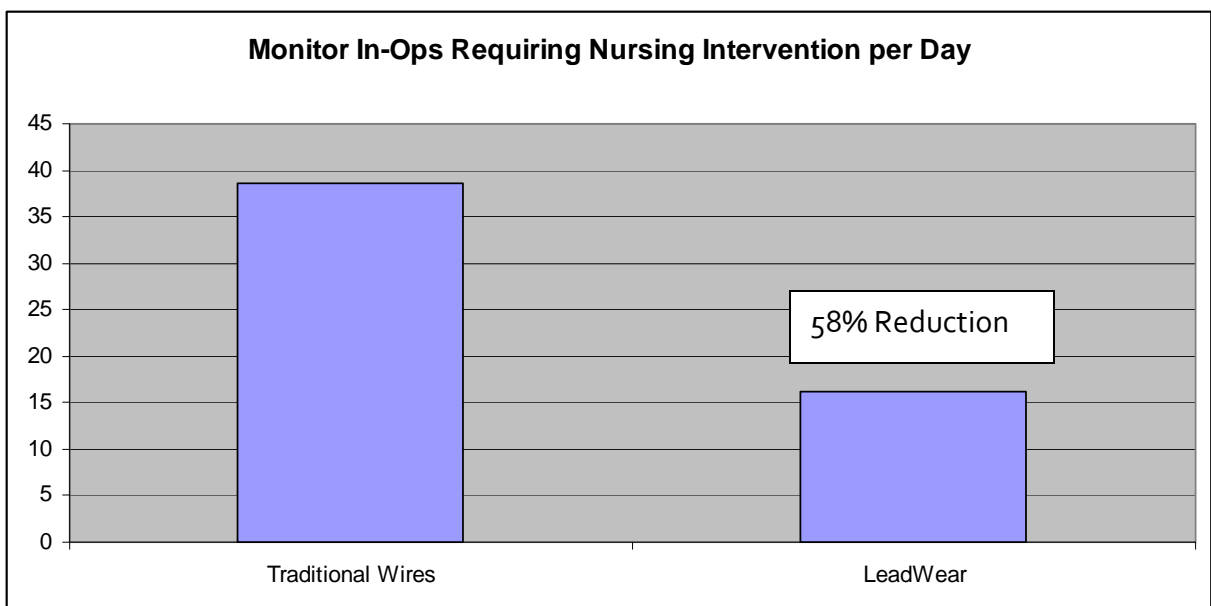
In 2008, a research study was conducted to determine if disposable LeadWear® from LifeSync Corporation reduced infection and increased nursing productivity by decreasing time spent replacing ECG leads off and detangling wires. The IRB-approved protocol was written and conducted by Florida Hospital, Center for Nursing Research & Innovation Department. LifeSync Corporation donated the LeadWear® for the study.

## Protocol:

The study tracked ECG-lead dislodgement for 40 days by determining the number of times the ECG tech called a nurse to correct such a problem on a wired system and compared the result to the same data on patients wearing LeadWear®. A mean staff time required to correct the dislodgement was determined.

## Results:

**Nurse Productivity:** When the data was compared, it was found that the volume of calls due to dislodgement dropped from 1,541 calls in 40 days while the patient was on traditional ECG wires to 647 calls in 40 days with the patient on the LeadWear®, representing a 58% reduction in leads off or 38.53 daily calls dropping to 16.18. The average time to correct the problem by the nurse was 6.61 minutes per call, a decrease in unscheduled nursing time spent handling dislodged ECG wires.



**Patient Safety:**

Time-off-monitor is a critical safety factor. Using the same data collected and accounting for the patient safety aspect of time off monitor, the study found that while using the LeadWear<sup>®</sup>, the patient time “off monitor” decreased by 105 minutes per day.

**Infections<sup>v</sup>:**

Prior to the use of disposable LeadWear<sup>®</sup> the infection rate was a very low 2.6%. After implementing the use of disposable LeadWear<sup>®</sup> the infection rate further reduced to 1.6% or equivalent to a 38% reduction in infection incidence.

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<sup>i</sup> See [www.flheart.org](http://www.flheart.org) , accessed 3/10/2009.

<sup>ii</sup> Ibid.

<sup>iii</sup> See [www.floridahospital.com/Services/CardiovascularInstitute.aspx](http://www.floridahospital.com/Services/CardiovascularInstitute.aspx), accessed 3/10/2009.

<sup>iv</sup> Ibid.

<sup>v</sup> Calculated by LifeSync Corporation from data provided by Florida Hospital Orlando, March 4, 2009.