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## MAUDE Adverse Event Report: PHILIPS MEDICAL SYSTEMS AVALON FM20 FETAL MONITOR



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### PHILIPS MEDICAL SYSTEMS AVALON FM20 FETAL MONITOR

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**Model Number** M2702A

**Event Date** 04/23/2015

**Event Type** Death

**Event Description**

The customer stated that they were "monitoring with m2702a avalon fm20 fetal monitor s/n: (b)(4). Baby was born dead but the fetal monitor has recorded fetal heart rate (fhr) traces and fetal movements (fmp) although the fetus already was dead. User want to know how to identify it was mother's hr instead of fhr. There was fmp and contraction showed in the toco".

### Manufacturer Narrative

Philips medical systems investigated the issue described above. On may 8, 2015, a philips field service engineer (fse) performed a functional test to verify the functionality of the avalon fm20 fetal monitor and determined that the device worked as specified. The provided trace recordings were reviewed by philips research & development department (r&d) and show: the heart rate baseline was around 120 bpm from 13:23 to 13:38 and from 14:16 to 16:08 with an increasing heart rate signal loss after 15:00. Movements were also recorded. From 18:01 to 18:48, only a toco transducer was applied (trace annotation ¿fhrx mode: no transducer¿). In addition a copy of the fetal monitor recording was provided, covering above mentioned time frames until 15:20. Based on the review of the provided traces and the additional information we received, it was determined that the philips device worked as specified. There is no indication that the clinicians verified fetal life before initiating fetal monitoring device labeling (instructions for use) instructs that ¿fetal monitoring technology available today is not always able to differentiate a fetal heart rate (fhr) signal source from a maternal heart rate (mhr) source in all situations ¿. This phenomenon is due to limitations of the technology and widely independent of the brand and model of the fetal monitor. In addition, an increased maternal pulse rate around and above 120 bpm is often seen with fetal demise. The maternal heart rate may be atypically high and therefore confused with that of a live fetus. Apparent fetal movement (fmp) may also be detected by the monitor but this may be a result of maternal movement causing the fetus to move within the amniotic fluid. Per philips (b)(4) and fse engineer, the m2702a avalon fm20 fetal monitor with s/n: (b)(4) works as specified. No product malfunction. The m2702a avalon fm20 fetal monitor remains at the customer site. There is no indication of any malfunction of the m2702a avalon fm20 fetal monitor. The available information does not support that use of the device was contributory to the reported stillbirth. The cause of the stillbirth is unknown. Based on the review of the provided traces and the additional information we received, it was determined that our device worked as specified. Device labeling (instructions for use) instructs that ¿fetal monitoring technology available today is not always able to differentiate a fetal heart rate (fhr) signal source from a maternal heart rate (mhr) source in all situations ¿. Users should confirm fetal life by independent means before starting to use the fetal monitor. Since a mhr trace can exhibit features that are very similar to those of a fhr trace, users should not rely solely on trace pattern features to identify a fetal source. Also, fetal movement profile (fmp) annotations on a fetal trace alone may not always indicate that the fetus is alive. The body of a deceased fetus can move and cause the monitor to annotate. Maternal signal sources may be picked up when using the ultrasound transducer and could lead to misidentification when the mhr is higher than normal (especially when > 100 bpm).

### Manufacturer Narrative

A follow up report will be submitted after philips obtains more information concerning this event.

### Event Description

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**Brand Name**AVALON FM20 FETAL MONITOR  
**Type of Device**FETAL MONITOR  
**Manufacturer (Section D)**PHILIPS MEDICAL SYSTEMS

Hewlett-Packard Str.2  
 Böblingen 71034  
 GERMANY 71034

**Manufacturer Contact**Denyse Murphy  
 3000 Minuteman Road  
 Andover , MA 01810

**MDR Report Key**4756179

**Report Number**9610816-2015-00093

**Device Sequence Number**1

**Product Code**[HGM](#)<sup>24</sup>

**Report Source**Manufacturer

**Source Type**Foreign,User facility,FOREIGN,USER FACILITY

**Reporter Occupation**Nurse

**Type of Report**Initial,Followup

**Report Date**04/29/2015

**1 Device Was Involved in the Event**

**1 Patient Was Involved in the Event**

**Date FDA Received**05/07/2015

**Is This An Adverse Event Report?**Yes

**Device Operator**Health Professional

**Device MODEL Number**M2702A

**Was Device Available For Evaluation?**Yes

**Is The Reporter A Health Professional?**Yes

**Was the Report Sent to FDA?**No

**Event Location**No Information

**Date Manufacturer Received**04/29/2015

**Was Device Evaluated By Manufacturer?**Yes

**Date Device Manufactured**07/11/2008

**Is The Device Single Use?**No

**Is this a Reprocessed and Reused Single-Use Device?**No

**Type of Device Usage**Reuse

**Patient TREATMENT DATA****Date Received: 05/07/2015 Patient Sequence Number: 1**

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