April 2017

Urgent: Medical Device Correction Update
Battery Performance of the Model 8637 SynchroMed® II Implantable Drug Infusion Pump
Update to 2011 Notification, for Pumps Manufactured through June 2011

Dear Healthcare Professional:

This notice provides an update to information previously communicated to physicians in July 2011 regarding the failure rate for reduced battery performance in Medtronic Model 8637 SynchroMed® II pumps manufactured through June 2011. This notice reinforces previously communicated patient management recommendations related to this issue. This notification does not apply to SynchroMed II devices currently being marketed or implanted, or to any previously implanted devices manufactured after June 2011.

In July 2011, Medtronic issued a notification regarding the potential for sudden loss of therapy due to reduced battery performance from the formation of a resistive film in a small percentage of SynchroMed II pumps. Note: affected pumps were manufactured through June 2011; therefore, at this time all affected devices have been implanted at least 5 years. In August 2011, Medtronic began distributing pumps with a new battery design that resolved this issue.

The following website can be used to identify whether a pump may be affected by this issue based on its serial number: http://synchromed2battery.medtronic.com

Nature of the Device Issue:
For pumps manufactured through June 2011 (this issue does not affect pumps manufactured after June 2011), reduced battery performance is caused by the formation of a resistive film within the battery. This issue may result in Low Battery Reset (critical alarm), premature Elective Replacement Indicator (non-critical alarm), or premature End of Service (critical alarm). For affected pumps, the minimum timeframe of 90 days between Elective Replacement Indicator and End of Service may also be reduced.

Potential Severity of the Issue:
A patient with a pump exhibiting reduced battery performance may experience return of underlying symptoms and/or withdrawal symptoms. Patients receiving intrathecal baclofen therapy are at risk for baclofen withdrawal syndrome, which can lead to a life-threatening condition if not promptly and effectively treated. The July 2011 letter communicated that one patient death had been attributed to this issue, and it was determined to be due to baclofen withdrawal syndrome; there have been no additional deaths directly attributed to this issue. For potential severity of withdrawal information on other drugs, please refer to the product labeling for the drug being administered. Patients with pumps experiencing Low Battery Reset or premature Elective Replacement Indicator due to this issue will require surgical revision to replace or remove their pump.
Scope:
Model 8637 SynchroMed II pumps with batteries manufactured prior to the design change in July 2011.

Updated Failure Rate Information:

- **Pumps manufactured From March 2005 through December 2010:**
  0.13% cumulative probability for pump failure due to this issue (upper bound of 0.16%) at 72 months after implant. This rate remains within the failure rate upper bound of 0.2% that was reported in 2011.

- **Pumps manufactured from January 2011 through June 2011:**
  3.17% cumulative probability for pump failure due to this issue (upper bound of 3.67%) at 72 months after implant. This failure rate exceeds the upper bound estimate of 0.2% that was reported in 2011.

The following website can be used to identify pump manufacture date range based on serial number: http://synchromed2battery.medtronic.com.

Recommendations:

**Medtronic does not recommend prophylactic replacement of SynchroMed II pumps with the prior battery design because of the estimated low occurrence rates, the presence of pump alarms, and the risks associated with replacement surgery.** This position has been reviewed and is supported by an experienced external physician panel. However, appropriate consideration should be given to individual patient medical needs. When the critical or non-critical alarms noted below occur, Medtronic strongly recommends that replacement surgery be scheduled as soon as possible for these patients.

Refer to the enclosed *Pump Event Information* for: 1) a description of Low Battery Reset (critical alarm), Elective Replacement Indicator (non-critical alarm), and End of Service (critical alarm), and 2) screenshots depicting how events are displayed and reported with the N'Vision Model 8840 clinician programmer.

If **Low Battery Reset (critical alarm) Occurs:** Replacement surgery should be scheduled as soon as possible. Although you may be able to reprogram the pump, the issue may reoccur at any time. Alternative medical management should be considered if appropriate.

If premature **Elective Replacement Indicator (non-critical alarm) or End of Service (critical alarm) occurs:** Replacement surgery should be scheduled as soon as possible. In the case of premature Elective Replacement Indicator, the minimum timeframe of 90 days between Elective Replacement Indicator and End of Service may be reduced due to this battery issue. The date for scheduled replacement of the pump that is displayed on the Model 8840 N'Vision clinician programmer may not be accurate for those pumps experiencing reduced battery performance. Alternative medical management should be considered if appropriate. Elective Replacement Indicator may be considered premature if it occurs sooner than expected based on implant duration and flow rate.

Contact Medtronic Technical Services (1-800-707-0933) for assistance determining if an Elective Replacement Indicator message can be considered premature.

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1 In addition, the July 2011 letter reported failure rates for pumps manufactured prior to March 2005; however, this population is beyond functional life of the device. These pumps are no longer in service.
Ongoing Patient Management Recommendations:

- Increase the critical alarm frequency to improve the probability of early identification of a Low Battery Reset (critical alarm) condition. Medtronic recommends changing the critical alarm interval frequency to sound every 10 minutes. Refer to the enclosed Alarm Information sheet for details.

- Remind patients, their caregivers, and your appropriate staff members to be alert for pump alarms. At implant or follow-up visits, perform an alarm test to provide an opportunity for patients and caregivers to hear and differentiate between the critical and non-critical pump alarms. Refer to the enclosed Alarm Information sheet for details. The alarm can be demonstrated with the 8840 Clinician Programmer or by using the following website: http://www.medtronic.com/us-en/patients/treatments-therapies/drug-pump-severe-spasticity/living-with/safety-pump-alarms.html

- Reinforce information on the signs and symptoms of withdrawal due to therapy cessation with patients and caregivers, and emphasize the importance of contacting their provider immediately.

- Inform patients and caregivers about the importance of keeping their pump refill appointments and contacting their physician immediately if their pump alarm sounds or if they notice a change in symptoms. Remind patients to always carry their patient identification card.

Additional Information:
Medtronic is communicating this information to the appropriate regulatory agencies globally, including the U.S. Food and Drug Administration.

As always, Medtronic requests you return any explanted products to Medtronic Returned Products Analysis. If you have questions please contact your Medtronic field representative, or contact Medtronic Neuromodulation Technical Services at 1-800-707-0933. This important patient management information is also available at http://professional.medtronic.com/pt/neuro/idd/ind/product-advisories.

We are committed to continuing to improve our product performance and services to enable you to manage your patients in a safe and effective manner. If you have questions, please contact Medtronic Neuromodulation Technical Services at 1-800-707-0933 weekdays 7am - 6pm CT. Please report any malfunction or adverse event related to a device to Medtronic Neuromodulation Technical Services and to FDA’s MedWatch Program (www.fda.gov/medwatch).

Sincerely,

Michael Ronningen
Vice President, Quality
Medtronic Pain Therapies

Enclosures:

- Pump Event Information
- Alarm Information Sheet
- Physician Reply Form
- Postage Paid Return Envelope