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MEDICAL DEVICE SAFETY ALERT

MiniMed[™] remote controller (MMT-503) TGA Reference: RC-2018-RN-01123-1 ARTG: 128416

Dear Customer,

fax 02 9878 5100

As our records show that you or one of your patients may be using an optional MiniMed[™] remote controller model number **MMT-503**, this notification is to inform you of a potential security risk related to the Medtronic MiniMed[™] Paradigm[™] series insulin pumps when using the corresponding MiniMed[™] remote controller.

Customer Action Required:

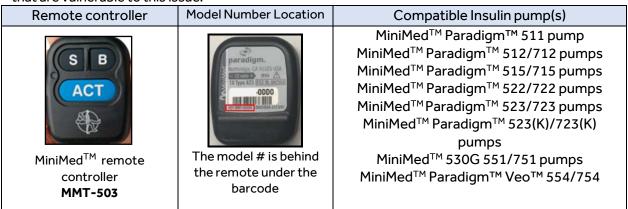
Acknowledge receipt of this notification by clicking the link below.

Problem/Issue Description:

The Medtronic remote controller, which uses a wireless (RF) radio frequency to communicate with your insulin pump, helps in programming a set amount of insulin (or bolus) into your Medtronic pump discreetly while keeping your device concealed.

An external security researcher has identified a potential vulnerability related to the MiniMedTM ParadigmTM family of insulin pumps and corresponding remote controller. The researcher's report states that an unauthorized individual in close proximity of an insulin pump user could potentially copy the wireless radio frequency (RF) signals from the user's remote controller (while they are in the process of delivering a remote bolus) and play those back later to deliver an involuntary bolus of insulin to the pump user. This could lead to potential health risks such as hypoglycemia if additional insulin is delivered beyond the user's insulin requirements.

The following list shows the Medtronic remote controller and compatible Medtronic insulin pump(s) that are vulnerable to this issue.



Several factors must occur for your patient's pump to be vulnerable:

- 1. The remote option for the pump would need to be enabled. This is not a factory-delivered default, and a user must choose this option.
- 2. The user's remote controller ID needs to be registered to the pump.
- 3. The Easy Bolus™ option would need to be turned on and a bolus step size programmed in the pump.

- 4. An unauthorized individual would need to be in close proximity of the user, with necessary equipment to copy the RF signals activated, when the user is delivering a bolus using the remote controller.
- 5. The unauthorized individual would need to be in close proximity of the user to play back the RF signals to deliver a malicious remote bolus.
- 6. The user would need to ignore the pump alerts, which indicates that a remote bolus is being delivered.

Protecting the security of your insulin pump

If you or your patients are concerned but want to continue to use the convenience of the remote controller, the following are some precautions you can take to minimize risk:

- Turn off Easy Bolus™ feature when not intending to use the remote bolus option
- Be attentive to the pump alerts, especially when the easy bolus option is turned on, and immediately cancel any unintended bolus
- Do not connect to any third-party devices not authorized by Medtronic

Please note that if your patient has never programmed a remote controller ID into your pump and never programmed the Easy BolusTM option, you will not be impacted by this vulnerability.

The MiniMed[™] Paradigm[™] family of insulin pumps remain safe and effective for diabetes management, so we encourage you to continue your therapy as you normally would and take these precautionary steps if you are concerned.

Additional Information

Medtronic is initiating this action in consultation with the Therapeutic Goods Administration.

Local contact details

At Medtronic, patient safety is our top priority, and we are committed to delivering safe and effective therapies that undergo rigorous clinical, quality, manufacturing and regulatory controls to ensure this for our customers. We appreciate your time and attention in reading this important notification. As always, we are here to support you. If you have further questions or need assistance, please call the **Medtronic Diabetes Helpline on 1800 777 808.**

Sincerely,

Sarah Timms

Post Market Quality Operational Excellence Manager | Quality and Regulatory Affairs

Medtronic

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FREQUENTLY ASKED QUESTIONS

Q1. IS THIS A RECALL?

This Safety Alert does not require patients to return their insulin pump nor remote controller.

Q2. DOES THE PUMP OR REMOTE CONTROLLER REQUIRE REPLACEMENT?

No replacement is needed for the insulin pump or remote controller. The MiniMedTM Paradigm™ family of insulin pumps remain safe and effective for diabetes management, so we encourage patients to continue their therapy as they normally would and take the previously mentioned precautionary steps if concerned.

Q3. WHEN DID MEDTRONIC FIRST LEARN OF THIS ISSUE?

Medtronic was first made aware of this potential issue in late May 2018 at which time we began actively reviewing all data and reports to ensure quick and complete communications to all potentially affected patients and health care providers.

Q4. HOW WORRIED SHOULD PUMP USERS BE?

We understand pump users could have concerns; however, several factors must occur for any pump or remote controller to be potentially vulnerable. There have been no reports of users being affected by this issue. If pump users feel concerned about this issue, we recommend turning off the remote controller feature in the insulin pump.

Q5. DOES THIS IMPACT THE MINIMED™ 600 SERIES INSULIN PUMPS?

No. This vulnerability does not impact the MiniMed[™] 600 series insulin pumps, this includes the MiniMed[™] 620G, MiniMed[™] 630G, MiniMed[™] 640G and MiniMed[™] 670G systems.

Q6. CAN THE REMOTE CONTROLLER BE REPLACED WITH A NEWER MODEL THAT IS NOT VULNERABLE TO THIS RISK?

No, Medtronic does not have any other remote controller compatible with MiniMedTM 508 or MiniMedTM Paradigm $^{\text{TM}}$ series insulin pumps.

Q7. HAS A MEDTRONIC DEVICE EVER BEEN MANIPULATED?

Medtronic has not received any reports of a product being breached in this manner. If you or your patients are concerned about this issue, we recommend instructing your patient to disable the remote controller feature in their pump.

Q8. WHAT ACTIONS IS MEDTRONIC TAKING TO ADDRESS THIS ISSUE?

We have notified the appropriate regulatory authorities, published an advisory about this potential security issue, and informed healthcare professionals and patients about precautionary steps that can be taken to protect the security of their pump.

Q9. HOW WOULD A PATIENT KNOW IF SOMEONE HAD MANIPULATED THEIR INSULIN PUMP?

Several factors must occur for any pump to be potentially vulnerable. We recommend that patients are always attentive to pump alerts, especially when the Easy BolusTM option is turned on, and immediately cancel any unintended bolus.

Q10. WHAT WOULD SOMEONE NEED TO KNOW TO EXPLOIT THESE VULNERABILITIES?

Several factors must occur for any pump to be potentially vulnerable. To ensure the security of our devices, we recommend you inform your patients to protect their pump and remote controller devices IDs.

Q11. MY PATIENTS DO NOT HAVE OR USE THE REMOTE CONTROLLER. ARE THEY STILL VULNERABLE TO THIS ISSUE?

Please consider that if your patient has never programmed a remote controller ID into their pump and never programmed the Easy BolusTM option, they are not susceptible to this vulnerability.

Additionally, if your patient disables the remote option or turn off the Easy Bolus[™] option on the pump, they will not be susceptible. By default, the Easy Bolus[™] and remote options are turned off in new pumps, so your patient would need to turn them on to be vulnerable.