




## Measures to eliminate and prevent alerts

MVOPT-RG-0006

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|---|--|-----------------|-------------|
|  | Measures to eliminate and prevent alerts |                 |             |
|   | Document Number:                         | MVOPT-RG-0006   | Version: 1  |
|   | Effective Date:                          | 25-October-2019 | Page 1 of 1 |


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## Revision History


| Version | Date        | Reason for changes | Description of changes made |
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| 1       | 25-Oct-2019 | Initial document   | N/A                         |

THE SOLE FUNCTION OF THE ABOVE TEXT IS TO APPROVE THE VERSION OF DOCUMENT AND TO MAINTAIN THE REVISION HISTORY. IT IS NOT PART OF THE DOCUMENT ITSELF. NOTE THAT A SEPARATE HEADER AND FOOTER IS USED ON THIS FIRST PAGE.

|   |  |              |
|---|--|--------------|
|  | Measures to eliminate and prevent alerts |              |
|   | Document Number: MVOPT-RG-0006           | Version: 1   |
|   | Effective Date: 25-October-2019          | Page 1 of 41 |

## Table of Contents

|     |   |    |
|-----|---|----|
| 1.  | Purpose of this document .....  | 2  |
| 2.  | Alerts generated by the verification system.....  | 3  |
| 3.  | Eliminate and prevent alerts .....  | 6  |
| 3.1 | Market Authorization Holders (MAH) and Parallel Import Authorization Holders (PIAH) ..... | 6  |
| 3.2 | Wholesalers.....  | 12 |
| 3.3 | Pharmacies.....   | 20 |
| 3.4 | Hospitals .....   | 31 |
| 4.  | Contacts .....  | 40 |
| 5.  | Definitions .....   | 41 |
| 6.  | Related documents.....  | 43 |

|   |  |              |
|---|--|--------------|
|  | Measures to eliminate and prevent alerts |              |
|   | Document Number: MVOPT-RG-0006           | Version: 1   |
|   | Effective Date: 25-October-2019          | Page 2 of 41 |


## 1. Purpose of this document

The purpose of this document is to describe the measures to be taken by each type of entity participating in the legal supply chain in order to eliminate and prevent alerts from being raised by the verification system.

The volume of alerts, as well the alerts/transactions ratio have been declining since the EMVS go-live in February 9th 2019. However, a significant number of alerts remain and must be eliminated from the system. Likewise, new alerts must be prevented from being raised.

The measures to be adopted by each type of entity results from the experience of having analysed all the Level 5 alerts generated since 9th February 2019 (approx. 2 million alerts), so that a root cause could be determined, and concrete actions could be defined and carried out by each entity.

Up until the moment of elaboration of this document, no real suspected falsification alerts were detected in Portugal.

|   |  |                 |              |
|---|--|-----------------|--------------|
|  | Measures to eliminate and prevent alerts |                 |              |
|   | Document Number:                         | MVOPT-RG-0006   | Version: 1   |
|   | Effective Date:                          | 25-October-2019 | Page 3 of 41 |

## 2. Alerts generated by the verification system

The verification system has been designed to generate exceptions (alerts) when a given transaction is not possible to be completed. The alerts are categorized into levels 1 to 5. For example, level 1 alert is when the user has failed to login into the system because in incorrect password was used.

A Level 5 alert is generated when the NMVS detects a potential suspect falsified pack within the European Medicines Verification System (EMVS), which are escalated to end-users as well as NMVO's, National Competent Authorities (NCAs) and OBP / MAHs.

The Level 5 alerts are the following:

| Alert message (Arvato NMVS)                          | Alert message (EU Hub) | Meaning   | Alert code (Arvato NMVS) | Alert code (EU Hub) |
|--|------------------------|---|--------------------------|---------------------|
| Unknown product code                                 | Product Not Found      | The Product Number (GTIN) from the data matrix was not found.                                       | NMVS_NC_PC_01            | #A1                 |
| Failed to find a batch for the given data            | Batch Not Found        | The Batch Id from the data matrix was not found for the Product Number (GTIN) from the data matrix. | NMVS_FE_LOT_03           | #A2                 |
| Expiry date does not match the date held in the NMVS | Expiry Date Mismatch   | The Expiry Date from the data matrix does not match the batch expiry date submitted to the EMVS.    | NMVS_FE_LOT_12           | #A52                |

## Measures to eliminate and prevent alerts

Document Number: MVOPT-RG-0006

Version: 1

Effective Date: 25-October-2019

Page 4 of 41

| Alert message (Arvato NMVS)   | Alert message (EU Hub)                                 | Meaning   | Alert code (Arvato NMVS) | Alert code (EU Hub) |
|---|--|---|--------------------------|---------------------|
| Unknown serial number   | Pack Not Found   | The Serial Number from the data matrix was not found for the Product Number (GTIN) from the data matrix.  | NMVS_NC_PC_02            | #A3                 |
| The batch ID does not match the serial number in the NMVS                 | Batch Number Mismatch                                  | The Serial Number from the data matrix was found for the Product Number (GTIN) from the data matrix, but it does not belong to the Batch Id from the data matrix. | NMVS_FE_LOT_13           | #A68                |
| Property is already set on pack   | Attempt to decommission an already decommissioned pack | Pack is already in requested state (applicable when an IMT is triggered).   | NMVS_NC_PCK_19           | #A7                 |
| Pack is already inactive  | Attempt to decommission an already decommissioned pack | A decommissioning was attempted for a pack that is already inactive.  | NMVS_NC_PCK_22           | #A24                |
| Defined timeframe between setting this property and the undo was exceeded | Time Limit Exceeded                                    | Maximum delay (10 days) between decommissioning and undo was exceeded (applicable when an IMT is triggered).  | NMVS_NC_PCK_20           | #A4                 |

## Measures to eliminate and prevent alerts

Document Number: MVOPT-RG-0006

Version: 1

Effective Date: 25-October-2019

Page 5 of 41

| Alert message<br>(Arvato NMVS)   | Alert message<br>(EU Hub)   | Meaning  | Alert code<br>(Arvato NMVS) | Alert code<br>(EU Hub) |
|--|---|--|-----------------------------|------------------------|
| Undo can only be executed by the same user who previously set the attribute                    | Undo can only be executed by the same user who previously set the attribute | Undo can only be executed at the same location (i.e. the same end user) where the original transaction occurred (applicable when an IMT is triggered). | NMVS_NC_PCK_21              | #A5                    |
| Actual pack status doesn't match the undo transaction (set and undo status must be equivalent) | Attempt to decommission an already decommissioned pack                      | Undo transaction does not match pack status (e.g. Undo Dispense attempted for a pack in status SAMPLE).  | NMVS_NC_PCK_06              | #A24                   |
| Status change could not be performed   | Attempt to decommission an already decommissioned pack                      | A decommissioning was attempted for a pack that is already inactive (applicable when an IMT is triggered).   | NMVS_NC_PCK_27              | #A24                   |

### 3. Eliminate and prevent alerts

All level 5 alerts raised by the PTMVS are analysed by PTMVO so a root cause (or at least a most probable cause) can be determined and corrective and/or preventive actions can be defined and carried out.

From the root cause analysis it is possible to determine the entity responsible that caused the alert in the system. The responsible entity for causing the alerts may or may not be the entity where the alerts were raised (e.g. an alert raised in a pharmacy may or may not have been caused by the pharmacy). In the following sub-chapters a description of the alerts, most probable causes and measures to eliminate the alerts is presented, organized by type of entity – MAH/PIAH, Wholesaler, Pharmacy or Hospital.

The most probable causes of the alerts and the measures to eliminate alerts presented in this document result from the experience of having analysed the alerts raised by PTMVS and the respective measures already implemented to eliminate the alerts from the system and from the experiences (analysis and solutions) shared within the European NMVO community.

#### 3.1 Market Authorization Holders (MAH) and Parallel Import Authorization Holders (PIAH)

In this sub-chapter are described the most probable causes of the alerts, when these are attributable to MAH or PIAH. If applied correctly, the measures presented to each case would eliminate the respective alerts.

| # | Alert Type        | Alert code | Most probable causes   | Measures to eliminate and prevent alerts  |
|---|-------------------|------------|--|---|
| 1 | Product Not Found | A1         | Pack data was not uploaded into the EMVS at the moment the end-user performed the transaction that originated the alert. | Master data and pack data must be loaded into the system before the packs are physically placed in the market.<br>In case of need, contact MVO Portugal by email to <a href="mailto:alertas@mvoportugal.pt">alertas@mvoportugal.pt</a> to request confirmation of successful data upload. |



## Measures to eliminate and prevent alerts

Document Number: MVOPT-RG-0006

Version: 1

Effective Date: 25-October-2019

Page 7 of 41

| # | Alert Type        | Alert code | Most probable causes  | Measures to eliminate and prevent alerts  |
|---|-------------------|------------|---|---|
| 2 | Product Not Found | A1         | Non-FMD pack bearing a 2D matrix code.  | <p>For all batches released before 9<sup>th</sup> February 2019 bearing 2D matrix codes, upload product and pack data into the EU-Hub.</p> <p>For all batches released before 9<sup>th</sup> February 2019 bearing 2D matrix codes, and all non-FMD medicines (e.g. Indian packs) must be reported via the form <a href="#">MVOPT-TP-0026 Non-FMD products released to the Portuguese market</a> and sent by email to <a href="mailto:alertas@mvoportugal.pt">alertas@mvoportugal.pt</a>.</p>                                   |
| 3 | Product Not Found | A1         | <p>Wrong encoding of the 2D code elements (e.g. GTIN with less than 14 characters).</p> <p>Wrong separation of the elements in the 2D (e.g. not separating the serial number or batch Id from the NN).</p> <p>Wrong identification of the 2D elements (e.g. encode the NN as the GTIN).</p> | <p>Ensure correct data encoding into the 2D code.</p> <p>Ensure both master data and pack data are uploaded into the EMVS and that is done before the packs reach physically the market.</p> <p>Ensure the data encoded into the 2D code is identical to the data uploaded into the EMVS.</p> <p>Any encoding error must be communicated to MVO Portugal via the form <a href="#">MVOPT-TP-0024 Report of problems by MAH PIAH</a> and sent by email to <a href="mailto:alertas@mvoportugal.pt">alertas@mvoportugal.pt</a>.</p> |
| 4 | Product Not Found | A1         | Wrong printing of the human readable elements (GTIN), if used in a manual transaction where the user inserts manually the GTIN.   | <p>Ensure correct printing of the human readable data. The human readable data must be identical to that uploaded into the EMVS and encoded into the 2D code.</p> <p>Any printing errors must be communicated to MVO Portugal via the form <a href="#">MVOPT-TP-0024 Report of problems by MAH PIAH</a> and sent by email to <a href="mailto:alertas@mvoportugal.pt">alertas@mvoportugal.pt</a>.</p>  |



## Measures to eliminate and prevent alerts

Document Number: MVOPT-RG-0006

Version: 1

Effective Date: 25-October-2019

Page 8 of 41

| # | Alert Type      | Alert code | Most probable causes   | Measures to eliminate and prevent alerts   |
|---|-----------------|------------|--|--|
| 5 | Batch Not Found | A2         | Pack data was not uploaded into the EMVS at the moment the end-user performed the transaction that originated the alert. | Master data and pack data must be loaded into the system before the packs are placed in the market.<br>In case of need, contact MVO Portugal by email to <a href="mailto:alertas@mvoportugal.pt">alertas@mvoportugal.pt</a> to request confirmation of successful data upload. |

## Measures to eliminate and prevent alerts

Document Number: MVOPT-RG-0006

Version: 1

Effective Date: 25-October-2019

Page 9 of 41

| # | Alert Type      | Alert code | Most probable causes   | Measures to eliminate and prevent alerts   |
|---|-----------------|------------|--|--|
| 6 | Batch Not Found | A2         | <p>Wrong encoding of the 2D code elements (e.g. misuse of upper case and lower case).</p> <p>Wrong separation of the elements in the 2D (e.g. not separating the serial number or batch Id from the NN).</p> <p>Wrong identification of the 2D elements (e.g. encode the NN as the GTIN).</p> <p>Data not identical in both the pack and the system.</p> | <p>Ensure correct data encoding into the 2D code.</p> <p>Ensure both master data and pack data are uploaded into the EMVS and that is done before the packs reach physically the market.</p> <p>Ensure the data encoded into the 2D code is identical to the data uploaded into the EMVS.</p> <p>Any encoding errors must be communicated to MVO Portugal via the form <a href="#">MVOPT-TP-0024 Report of problems by MAH PIAH</a> and sent by email to <a href="mailto:alertas@mvoportugal.pt">alertas@mvoportugal.pt</a>.</p> |
| 7 | Pack Not Found  | A3         | <p>Pack data was not uploaded into the EMVS at the moment the end-user performed the transaction that originated the alert.</p> <p>Packs physically released to the market but whose data was not uploaded into the EMVS (e.g. retained quality samples).</p>  | <p>Master data and pack data must be loaded into the system before the packs are placed in the market.</p> <p>In case of need, contact MVO Portugal by email to <a href="mailto:alertas@mvoportugal.pt">alertas@mvoportugal.pt</a> to request confirmation of successful data upload (specific serial numbers are not possible to confirm as the data is not accessible).</p>  |
| 8 | Pack Not Found  | A3         | <p>Wrong encoding of the 2D code elements (e.g. misuse of upper case and lower case).</p> <p>Wrong separation of the elements in the 2D (e.g. not separating the serial number or batch Id from the NN).</p> <p>Wrong identification of the 2D elements (e.g. encode the NN as the GTIN).</p> <p>Data not identical in both the pack and the system.</p> | <p>Ensure correct data encoding into the 2D code.</p> <p>Ensure both master data and pack data are uploaded into the EMVS and that is done before the packs reach physically the market.</p> <p>Ensure the data encoded into the 2D code is identical to the data uploaded into the EMVS.</p> <p>Any encoding errors must be communicated to MVO Portugal via the form <a href="#">MVOPT-TP-0024 Report of problems by MAH PIAH</a> and sent by email to <a href="mailto:alertas@mvoportugal.pt">alertas@mvoportugal.pt</a>.</p> |

## Measures to eliminate and prevent alerts

Document Number: MVOPT-RG-0006

Version: 1

Effective Date: 25-October-2019

Page 10 of 41

| #  | Alert Type           | Alert code | Most probable causes  | Measures to eliminate and prevent alerts  |
|----|----------------------|------------|---|---|
| 9  | Pack Not Found       | A3         | Wrong printing of the human readable elements (serial number), if used in a manual transaction where the user inserts manually the GTIN.  | <p>Ensure correct printing of the human readable data. The human readable data must be identical to that uploaded into the EMVS and encoded into the 2D code.</p> <p>Any printing errors must be communicated to MVO Portugal via the form <a href="#">MVOPT-TP-0024 Report of problems by MAH PIAH</a> and sent by email to <a href="mailto:alertas@mvoportugal.pt">alertas@mvoportugal.pt</a>.</p>  |
| 10 | Expiry Date Mismatch | A52        | <p>The expiry date loaded into the system is not identical to the expiry date encoded into the 2D code.</p> <p>Example: expiry date loaded into the system is 220122 (following the YYMMDD format), and the expiry date encoded into the 2D code is 220131.</p> | <p>Expiry date encoding into the 2D code must follow the format YYMMDD.</p> <p>Ensure the data encoded into the 2D code is identical to the data uploaded into the EMVS.</p> <p>Ensure the expiry date in the 2D code is identical to the human readable expiry date. If human readable expiry date has only month and year, then the expiry date in the 2D code should be YYMM00 (two zeros at the end).</p> <p>Any expiry date errors must be communicated to MVO Portugal via the form <a href="#">MVOPT-TP-0024 Report of problems by MAH PIAH</a> and sent by email to <a href="mailto:alertas@mvoportugal.pt">alertas@mvoportugal.pt</a>.</p> |

## Measures to eliminate and prevent alerts

Document Number: MVOPT-RG-0006

Version: 1

Effective Date: 25-October-2019

Page 11 of 41

| #  | Alert Type            | Alert code | Most probable causes   | Measures to eliminate and prevent alerts  |
|----|-----------------------|------------|--|---|
| 11 | Batch Number Mismatch | A68        | <p>Wrong encoding of the 2D code elements (e.g. misuse of upper case and lower case in the batch ID).</p> <p>Wrong separation of the elements in the 2D (e.g. not separating the batch id from the NN).</p> <p>Wrong identification of the 2D elements (e.g. encode the NN as the GTIN).</p> <p>Wrong data encoded into the pack (e.g. encoding a valid serial number that belongs to another batch).</p> <p>Wrong data uploaded into the EMVS (valid batch id and valid serial number but serial number belongs to another batch).</p> <p>Data not identical in both the pack and the system.</p> | <p>Ensure correct data encoding into the 2D code.</p> <p>Ensure both master data and pack data are uploaded into the EMVS.</p> <p>Ensure the data encoded into the 2D code is identical to the data uploaded into the EMVS.</p> <p>Any encoding error must be communicated to MVO Portugal via the form <a href="#">MVOPT-TP-0024 Report of problems by MAH PIAH</a> and sent by email to <a href="mailto:alertas@mvoportugal.pt">alertas@mvoportugal.pt</a>.</p> |

## Measures to eliminate and prevent alerts

Document Number: MVOPT-RG-0006

Version: 1

Effective Date: 25-October-2019

Page 12 of 41

### 3.2 Wholesalers

In this sub-chapter are described the most probable causes of the alerts, when these are attributable to wholesalers. If applied correctly, the measures presented to each case would eliminate the respective alerts.

| # | Alert Type           | Alert code    | Most probable causes   | Measures to eliminate and prevent alerts   |
|---|----------------------|---------------|--|--|
| 1 | Unknown product code | NMVS_NC_PC_01 | <p>Alerts caused by scanner misconfiguration (problems in the scanner device and/or in the associated software):</p> <p>Wrong identification of the 2D elements (e.g. consider the NN as the GTIN).</p> <p>Wrong separation of the elements in the 2D code (e.g. consider a GTIN with less/more than 14 digits).</p> | <p>Ensure correct scanner/software configuration (e.g. group separators). Involve scanner/software suppliers if necessary.</p> <p>The scanner/software must transfer the exact content of the 2D code read, with no interpretations.</p> <p>More information on scanner configuration can be found <a href="#">here</a>.</p> <p>The identified problems must be communicated to MVO Portugal via the form <a href="#">MVOPT-TP-0022 Report of problems by End Users</a> and sent by email to <a href="mailto:alertas@mvoportugal.pt">alertas@mvoportugal.pt</a>.</p> |

## Measures to eliminate and prevent alerts

Document Number: MVOPT-RG-0006

Version: 1

Effective Date: 25-October-2019

Page 13 of 41

| # | Alert Type                                | Alert code     | Most probable causes   | Measures to eliminate and prevent alerts  |
|---|---|----------------|--|---|
| 2 | Failed to find a batch for the given data | NMVS_FE_LOT_03 | <p>Alerts caused by scanner misconfiguration (problems in the scanner device and/or in the associated software):</p> <p>Wrong interpretation of upper case/lower case (e.g. the batch id is "A1B2C3" but is read by the scanner as "a1b2c3").</p> <p>No read of special characters in batch id (e.g. the batch id "12345-B1" is read by the scanner as "12345B1").</p> <p>Wrong identification of the 2D elements (e.g. the serial number is read by the scanner or transferred to the NMVS as being the batch id).</p> <p>Wrong separation of the elements in the 2D code (e.g. consider a concatenation of the batch id and the NN as the batch id).</p> | <p>Ensure correct scanner/software configuration (e.g. character set conversion). Involve scanner/software suppliers if necessary.</p> <p>The scanner/software must transfer the exact content of the 2D code read, with no interpretations.</p> <p>The scanner/software must retrieve the exact content of the 2D code, with no interpretations.</p> <p>More information on scanner configuration can be found <a href="#">here</a>.</p> <p>The identified problems must be communicated to MVO Portugal via the form <a href="#">MVOPT-TP-0022 Report of problems by End Users</a> and sent by email to <a href="mailto:alertas@mvoportugal.pt">alertas@mvoportugal.pt</a>.</p> |

## Measures to eliminate and prevent alerts

Document Number: MVOPT-RG-0006

Version: 1

Effective Date: 25-October-2019

Page 14 of 41

| # | Alert Type            | Alert code    | Most probable causes   | Measures to eliminate and prevent alerts  |
|---|-----------------------|---------------|--|---|
| 3 | Unknown serial number | NMVS_NC_PC_02 | <p>Alerts caused by scanner misconfiguration (problems in the scanner device and/or in the associated software):</p> <p>Wrong interpretation of upper case/lower case (e.g. the serial number is "A1B2C3" but is read by the scanner as "a1b2c3").</p> <p>Unread special characters in the serial number (e.g. the serial number is "12345-B1" but is read by the scanner as "12345B1").</p> <p>Wrong identification of the 2D elements (e.g. the serial number is read by the scanner or transferred to the NMVS as being the batch id).</p> <p>Wrong separation of the elements in the 2D code (e.g. consider a concatenation of the serial number and the NN as the serial number).</p> | <p>Ensure correct scanner/software configuration (e.g. reverse printing). Involve scanner/software suppliers if necessary.</p> <p>The scanner/software must transfer the exact content of the 2D code read, with no interpretations. More information on scanner configuration can be found <a href="#">here</a>.</p> <p>The identified problems must be communicated to MVO Portugal via the form <a href="#">MVOPT-TP-0022 Report of problems by End Users</a> and sent by email to <a href="mailto:alertas@mvoportugal.pt">alertas@mvoportugal.pt</a>.</p> |



## Measures to eliminate and prevent alerts

Document Number: MVOPT-RG-0006

Version: 1

Effective Date: 25-October-2019

Page 15 of 41

| # | Alert Type   | Alert code     | Most probable causes   | Measures to eliminate and prevent alerts  |
|---|--|----------------|--|---|
| 4 | Expiry date does not match the date held in the NMVS | NMVS_FE_LOT_12 | <p>Alerts caused by scanner misconfiguration (problems in the scanner device and/or in the associated software):</p> <p>Read the expiry date in reverse order (i.e. instead of reading YYMMDD, the scanner reads DDMMYY).</p> <p>The scanner/software considers the date in which the transaction occurred and not the date encoded into the 2D code (e.g. the date in the 2D code is 220415, but the scanner/software retrieves 190901).</p> <p>The scanner/software converts the date in the 2D code into the last day of the month or the last day of the previous month (e.g. the date in the 2D code is 220415, but the scanner/software converts to 220430).</p> <p>The scanner/software converts the date in the 2D code into the first day of the month (e.g. the date in the 2D code is 220415, but the scanner/software converts to 220401).</p> | <p>Ensure correct scanner/software configuration (e.g. interface). Involve scanner/software suppliers if necessary.</p> <p>The scanner/software must retrieve the exact content of the 2D code, with no interpretations. More information on scanner configuration can be found <a href="#">here</a>.</p> <p>The identified problems must be communicated to MVO Portugal via the form <a href="#">MVOPT-TP-0022 Report of problems by End Users</a> and sent by email to <a href="mailto:alertas@mvoportugal.pt">alertas@mvoportugal.pt</a>.</p> |

## Measures to eliminate and prevent alerts

Document Number: MVOPT-RG-0006

Version: 1

Effective Date: 25-October-2019

Page 16 of 41

| # | Alert Type  | Alert code     | Most probable causes   | Measures to eliminate and prevent alerts  |
|---|---|----------------|--|---|
| 5 | The batch ID does not match the serial number in the NMVS | NMVS_FE_LOT_13 | <p>Alerts caused by scanner misconfiguration (problems in the scanner device and/or in the associated software):</p> <p>Wrong interpretation of upper case/lower case (e.g. the batch id is "A1B2C3" but is read by the scanner as "a1b2c3").</p> <p>Unread special characters in batch id (e.g. the batch id "12345-B1" is read by the scanner as "12345B1").</p> <p>Wrong identification of the 2D elements (e.g. the serial number is read by the scanner or transferred to the NMVS as being the batch id).</p> <p>Wrong separation of the elements in the 2D code (e.g. consider a concatenation of the batch id and the NN as the batch id).</p> | <p>Ensure correct scanner/software configuration (e.g. character set configuration). Involve scanner/software suppliers if necessary.</p> <p>The scanner/software must retrieve the exact content of the 2D code, with no interpretations. More information on scanner configuration can be found <a href="#">here</a>.</p> <p>The identified problems must be communicated to MVO Portugal via the form <a href="#">MVOPT-TP-0022 Report of problems by End Users</a> and sent by email to <a href="mailto:alertas@mvoportugal.pt">alertas@mvoportugal.pt</a>.</p> |

## Measures to eliminate and prevent alerts

Document Number: MVOPT-RG-0006

Version: 1

Effective Date: 25-October-2019

Page 17 of 41

| # | Alert Type               | Alert code     | Most probable causes   | Measures to eliminate and prevent alerts   |
|---|--------------------------|----------------|--|--|
| 6 | Pack is already inactive | NMVS_NC_PCK_22 | Repetition of a decommissioning operation on an already decommissioned pack. The pack was initially decommissioned by the wholesaler itself or another wholesaler. | <p>Before performing the decommission operation, always perform a verify operation. If the pack is already inactive, do not try to decommission again.</p> <p>For bulk transactions, the end-user system must not allow a second call to the PTMVS before receiving the response to the first call.</p> <p>Retry mechanisms in the End User systems must be developed and configured so that they do not generate unnecessary retries:</p> <ul style="list-style-type: none"> <li>• Single transactions: only known and configured return codes or return system messages should generate retry attempts. Time between retries should increase with the number of attempts.</li> <li>• Bulk and mixed bulk transactions: results should be requested with a minimum of 1 minute after the original transaction was requested. The original bulk transaction must not be retried if the result is not received, successful or return code unknown.</li> </ul> <p>The identified problems must be communicated to MVO Portugal via the form <a href="#">MVOPT-TP-0022 Report of problems by End Users</a> and sent by email to <a href="mailto:alertas@mvoportugal.pt">alertas@mvoportugal.pt</a>.</p> |

## Measures to eliminate and prevent alerts

Document Number: MVOPT-RG-0006

Version: 1

Effective Date: 25-October-2019

Page 18 of 41

| # | Alert Type  | Alert code     | Most probable causes  | Measures to eliminate and prevent alerts  |
|---|---|----------------|---|---|
| 7 | Pack is already inactive  | NMVS_NC_PCK_22 | The pack was delivered in the inactive state in the point of dispense (pharmacies or hospitals). The pack must be delivered in the active state.  | <p>Ensure the packs are delivered in active state to pharmacies and hospitals.</p> <p>Correctly maintain the product and customer master data in order to identify which products and clients require decommission or not.</p> <p>The lists of hospitals that need to receive the packs in active state can be found <a href="#">here</a>, <a href="#">here</a> and <a href="#">here</a>.</p> <p>The identified problems must be communicated to MVO Portugal via the form <a href="#">MVOPT-TP-0022 Report of problems by End Users</a> and sent by email to <a href="mailto:alertas@mvoportugal.pt">alertas@mvoportugal.pt</a>.</p> |
| 8 | Defined timeframe between setting this property and the undo was exceeded | NMVS_NC_PCK_20 | <p>Undo transactions were performed after the 10 days immediately after the initial transaction.</p> <p>Undo operations can only be performed in the 10 days immediately after the initial transaction.</p> | <p>The end-user must keep track of the initial transaction performed (in case it was performed by the End User itself, including date and nominated User), so the 10 days' timeframe can be managed, and the alert can be avoided.</p> <p>Before performing the undo operation, always verify if the pack was transacted by the End User, the type of transaction performed and then execute a verify operation to know the current pack status. If the pack is in a status different from last status generated by the End User and the date is not known, do not try to perform the undo operation.</p>                             |

## Measures to eliminate and prevent alerts

Document Number: MVOPT-RG-0006

Version: 1

Effective Date: 25-October-2019

Page 19 of 41

| #  | Alert Type  | Alert code     | Most probable causes   | Measures to eliminate and prevent alerts  |
|----|---|----------------|--|---|
| 9  | Undo can only be executed by the same user who previously set the attribute | NMVS_NC_PCK_21 | Undo transaction was performed by a user that did not perform the initial transaction.<br>Undo transactions can only be performed by the same user that performed the initial transaction. | <p>The end-user must keep track of the initial transaction performed (in case it was performed by the End User itself, including date and nominated user), so the alert can be avoided.</p> <p>Before performing the undo operation, always verify if the pack was transacted by the End User, the type of transaction performed and then execute a verify operation to know the current pack status. If the pack is in a status different from last status generated by the End User and the nominated user that performed the initial transaction is not known, do not try to perform the undo operation.</p> <p>The identified problems must be communicated to MVO Portugal via the form <a href="#">MVOPT-TP-0022 Report of problems by End Users</a> and sent by email to <a href="mailto:alertas@mvoportugal.pt">alertas@mvoportugal.pt</a>.</p> |
| 10 | Input data does not match the XML schema definition                         | NMVS_TE_XM_02  | Undo manual transactions performed without batch ID and the expiry date.   | <p>The End User systems must request the batch ID and expiry date in the manual transactions, as these are mandatory fields for the undo transactions.</p> <p>The identified problems must be communicated to MVO Portugal via the form <a href="#">MVOPT-TP-0022 Report of problems by End Users</a> and sent by email to <a href="mailto:alertas@mvoportugal.pt">alertas@mvoportugal.pt</a>.</p>  |

## Measures to eliminate and prevent alerts

Document Number: MVOPT-RG-0006

Version: 1

Effective Date: 25-October-2019

Page 20 of 41

### 3.3 Pharmacies

In this sub-chapter are described the most probable causes of the alerts, when these are attributable to pharmacies. If applied correctly, the measures presented to each case would eliminate the respective alerts.

| # | Alert Type           | Alert code    | Most probable causes                                    | Measures to eliminate alerts   |
|---|----------------------|---------------|---|--|
| 1 | Unknown product code | NMVS_NC_PC_01 | Manual insertion of pack data of a non-serialized pack. | <p>If the pack does not bear a 2D code, it is not under the Delegated Regulation and therefore it is not to be scanned for this purpose.</p> <p>In case the pack bears a 2D code, the End User must always read the 2D code and communicate it to the PtMVS.</p> <p>The identified problems must be communicated to MVO Portugal via the form <a href="#">MVOPT-TP-0022 Report of problems by End Users</a> and sent by email to <a href="mailto:alertas@mvoportugal.pt">alertas@mvoportugal.pt</a>.</p> |

## Measures to eliminate and prevent alerts

Document Number: MVOPT-RG-0006

Version: 1

Effective Date: 25-October-2019

Page 21 of 41

| # | Alert Type           | Alert code    | Most probable causes   | Measures to eliminate alerts  |
|---|----------------------|---------------|--|---|
| 2 | Unknown product code | NMVS_NC_PC_01 | Wrong manual insertion of the human readable elements.   | <p>The manual insertion transactions were designed for fallback scenarios and therefore not to be used on a regular basis, as the probability of manual data insertions errors is very high. As such, manual transactions are to be used the least possible.</p> <p>In case of use of manual transactions, ensure that the insertion of the unique identifier elements (GTIN and serial number) are correctly inserted. The PtMVS provides 3 attempts to insert incorrect information before generating a L5 alert.</p> <p>The identified problems must be communicated to MVO Portugal via the form <a href="#">MVOPT-TP-0022 Report of problems by End Users</a> and sent by email to <a href="mailto:alertas@mvoportugal.pt">alertas@mvoportugal.pt</a>.</p> |
| 3 | Unknown product code | NMVS_NC_PC_01 | <p>Alerts caused by scanner misconfiguration (problems in the scanner device and/or in the associated software):</p> <p>Wrong identification of the 2D elements (e.g. consider the NN as the GTIN).</p> <p>Wrong separation of the elements in the 2D code (e.g. consider a GTIN with less/more than 14 digits).</p> | <p>Ensure correct scanner/software configuration (e.g. group separators). Involve scanner/software suppliers if necessary.</p> <p>The scanner/software must transfer the exact content of the 2D code, with no interpretations. More information on scanner configuration can be found <a href="#">here</a>.</p> <p>The identified problems must be communicated to MVO Portugal via the form <a href="#">MVOPT-TP-0022 Report of problems by End Users</a> and sent by email to <a href="mailto:alertas@mvoportugal.pt">alertas@mvoportugal.pt</a>.</p>  |

## Measures to eliminate and prevent alerts

Document Number: MVOPT-RG-0006

Version: 1

Effective Date: 25-October-2019

Page 22 of 41

| # | Alert Type           | Alert code    | Most probable causes  | Measures to eliminate alerts   |
|---|----------------------|---------------|---|--|
| 4 | Unknown product code | NMVS_NC_PC_01 | Upon an unsuccessful manual transaction, the pharmacy software creates series of calls on the same pack which in turn create alerts for the same pack in fixed time intervals (e.g. every ten minutes). | <p>The development and/or configuration of the pharmacy software must be reviewed so the error is corrected.</p> <p>Retry mechanisms in the End User systems must be developed and configured so that they do not generate unnecessary retries: only known and configured return codes or return system messages should generate retry attempts. Time between retries should increase with the number of attempts.</p> <p>The identified problems must be communicated to MVO Portugal via the form <a href="#">MVOPT-TP-0022 Report of problems by End Users</a> and sent by email to <a href="mailto:alertas@mvoportugal.pt">alertas@mvoportugal.pt</a>.</p> |



## Measures to eliminate and prevent alerts

Document Number: MVOPT-RG-0006

Version: 1

Effective Date: 25-October-2019

Page 23 of 41

| # | Alert Type                                | Alert code     | Most probable causes  | Measures to eliminate alerts  |
|---|---|----------------|---|---|
| 5 | Failed to find a batch for the given data | NMVS_FE_LOT_03 | <p>Alerts caused by scanner misconfiguration (problems in the scanner device and/or in the associated software):</p> <p>Wrong interpretation of upper case/lower case (e.g. the batch id is "A1B2C3" but is read by the scanner as "a1b2c3").</p> <p>No read of special characters in batch id (e.g. the batch id "12345-B1" is read by the scanner as "12345B1").</p> <p>Wrong identification of the 2D elements (e.g. the serial number is read by the scanner or transferred to the NMVS as being the batch id).</p> <p>Wrong separation of the elements in the 2D code (e.g. consider a concatenation of the batch id and the NN as the batch id).</p> <p>The speed of the scanner reading is not adjusted. In cases of a sale with more than one pack, the scanner mixes the elements of the packs (e.g. in the same transaction, considers the GTIN of one pack and the batch id of another).</p> | <p>Ensure correct scanner/software configuration (e.g. character set conversion). Involve scanner/software suppliers if necessary.</p> <p>The scanner/software must transfer the exact content of the 2D code read, with no interpretations. More information on scanner configuration can be found <a href="#">here</a>.</p> <p>The identified problems must be communicated to MVO Portugal via the form <a href="#">MVOPT-TP-0022 Report of problems by End Users</a> and sent by email to <a href="mailto:alertas@mvoportugal.pt">alertas@mvoportugal.pt</a>.</p> |

## Measures to eliminate and prevent alerts

Document Number: MVOPT-RG-0006

Version: 1

Effective Date: 25-October-2019

Page 24 of 41

| # | Alert Type            | Alert code    | Most probable causes  | Measures to eliminate alerts  |
|---|-----------------------|---------------|---|---|
| 6 | Unknown serial number | NMVS_NC_PC_02 | <p>Alerts caused by scanner misconfiguration (problems in the scanner device and/or in the associated software):</p> <p>Wrong interpretation of upper case/lower case (e.g. the serial number is "A1B2C3" but is read by the scanner as "a1b2c3").</p> <p>No read of special characters in the serial number (e.g. the serial number is "12345-B1" but is read by the scanner as "12345B1").</p> <p>Wrong identification of the 2D elements (e.g. the serial number is read by the scanner or transferred to the NMVS as being the batch id).</p> <p>Wrong separation of the elements in the 2D code (e.g. consider a concatenation of the serial number and the NN as the serial number).</p> <p>The speed of the scanner reading is not adjusted. In cases of a sale with more than one pack, the scanner mixes the elements of the packs (e.g. in the same transaction, considers the GTIN of one pack and the batch id of another).</p> | <p>Ensure correct scanner/software configuration. Involve scanner/software suppliers if necessary. The scanner/software must transfer the exact content of the 2D code, with no interpretations. More information on scanner configuration can be found <a href="#">here</a>.</p> <p>The identified problems must be communicated to MVO Portugal via the form <a href="#">MVOPT-TP-0022 Report of problems by End Users</a> and sent by email to <a href="mailto:alertas@mvoportugal.pt">alertas@mvoportugal.pt</a>.</p> |

## Measures to eliminate and prevent alerts

Document Number: MVOPT-RG-0006

Version: 1

Effective Date: 25-October-2019

Page 25 of 41

| # | Alert Type            | Alert code    | Most probable causes  | Measures to eliminate alerts   |
|---|-----------------------|---------------|---|--|
| 7 | Unknown serial number | NMVS_NC_PC_02 | Upon an unsuccessful manual transaction, the pharmacy software creates series of calls on the same pack which in turn create alerts for the same pack in fixed time intervals (e.g. every ten minutes). | <p>The development and/or configuration of the pharmacy software must be reviewed so the error is corrected.</p> <p>Retry mechanisms in the End User systems must be developed and configured so that they do not generate unnecessary retries: only known and configured return codes or return system messages should generate retry attempts. Time between retries should increase with the number of attempts.</p> <p>The identified problems must be communicated to MVO Portugal via the form <a href="#">MVOPT-TP-0022 Report of problems by End Users</a> and sent by email to <a href="mailto:alertas@mvoportugal.pt">alertas@mvoportugal.pt</a>.</p> |

## Measures to eliminate and prevent alerts

Document Number: MVOPT-RG-0006

Version: 1

Effective Date: 25-October-2019

Page 26 of 41

| # | Alert Type   | Alert code     | Most probable causes   | Measures to eliminate alerts  |
|---|--|----------------|--|---|
| 8 | Expiry date does not match the date held in the NMVS | NMVS_FE_LOT_12 | <p>Alerts caused by scanner misconfiguration (problems in the scanner device and/or in the associated software):</p> <p>Read the expiry date in reverse order (i.e. instead of reading YYMMDD, the scanner reads DDMMYY).</p> <p>The scanner/software considers the date in which the transaction occurred and not the date encoded into the 2D code (e.g. the date in the 2D code is 220415, but the scanner/software retrieves 190901).</p> <p>The scanner/software converts the date in the 2D code into the last day of the month or the last day of the previous month (e.g. the date in the 2D code is 220415, but the scanner/software converts to 220430).</p> <p>The scanner/software converts the date in the 2D code into the first day of the month (e.g. the date in the 2D code is 220415, but the scanner/software converts to 220401).</p> | <p>Ensure correct scanner/software configuration (e.g. interface). Involve scanner/software suppliers if necessary.</p> <p>The scanner/software must transfer the exact content of the 2D code, with no interpretations. More information on scanner configuration can be found <a href="#">here</a>.</p> <p>The identified problems must be communicated to MVO Portugal via the form <a href="#">MVOPT-TP-0022 Report of problems by End Users</a> and sent by email to <a href="mailto:alertas@mvoportugal.pt">alertas@mvoportugal.pt</a>.</p> |

## Measures to eliminate and prevent alerts

Document Number: MVOPT-RG-0006

Version: 1

Effective Date: 25-October-2019

Page 27 of 41

| # | Alert Type  | Alert code     | Most probable causes  | Measures to eliminate alerts  |
|---|---|----------------|---|---|
| 9 | The batch ID does not match the serial number in the NMVS | NMVS_FE_LOT_13 | <p>Alerts caused by scanner misconfiguration (problems in the scanner device and/or in the associated software):</p> <p>Wrong interpretation of upper case/lower case (e.g. the batch id is "A1B2C3" but is read by the scanner as "a1b2c3").</p> <p>Unread special characters in batch id (e.g. the batch id "12345-B1" is read by the scanner as "12345B1").</p> <p>Wrong identification of the 2D elements (e.g. the serial number is read by the scanner or transferred to the NMVS as being the batch id).</p> <p>Wrong separation of the elements in the 2D code (e.g. consider a concatenation of the batch id and the NN as the batch id).</p> <p>The speed of the scanner reading is not adjusted. In cases of a sale with more than one pack, the scanner mixes the elements of the packs (e.g. in the same transaction, considers the GTIN of one pack and the batch id of another).</p> | <p>Ensure correct scanner/software configuration (e.g. character set configuration). Involve scanner/software suppliers if necessary.</p> <p>The scanner/software must transfer the exact content of the 2D code, with no interpretations. More information on scanner configuration can be found <a href="#">here</a>.</p> <p>The identified problems must be communicated to MVO Portugal via the form <a href="#">MVOPT-TP-0022 Report of problems by End Users</a> and sent by email to <a href="mailto:alertas@mvoportugal.pt">alertas@mvoportugal.pt</a>.</p> |

## Measures to eliminate and prevent alerts

Document Number: MVOPT-RG-0006

Version: 1

Effective Date: 25-October-2019

Page 28 of 41

| #  | Alert Type               | Alert code     | Most probable causes   | Measures to eliminate alerts   |
|----|--------------------------|----------------|--|--|
| 10 | Pack is already inactive | NMVS_NC_PCK_22 | Repetition of a decommissioning operation on an already decommissioned pack. The pack was initially decommissioned by the pharmacy itself. | Before performing the decommission operation, always perform a verify operation. If the pack is already inactive, do not try to decommission again.<br>The identified problems must be communicated to MVO Portugal via the form <a href="#">MVOPT-TP-0022 Report of problems by End Users</a> and sent by email to <a href="mailto:alertas@mvoportugal.pt">alertas@mvoportugal.pt</a> . |

## Measures to eliminate and prevent alerts

Document Number: MVOPT-RG-0006

Version: 1

Effective Date: 25-October-2019

Page 29 of 41

| #  | Alert Type  | Alert code     | Most probable causes   | Measures to eliminate alerts  |
|----|---|----------------|--|---|
| 11 | Defined timeframe between setting this property and the undo was exceeded | NMVS_NC_PCK_20 | <p>Undo transactions was performed after the 10 days immediately after the initial transaction.</p> <p>Undo operations can only be performed in the 10 days immediately after the initial transaction.</p> | <p>The End User must keep track of the initial transaction performed (in case it was performed by the End User itself, including date and nominated user), so the 10 days' timeframe can be managed, and the alert can be avoided.</p> <p>Before performing the undo operation, always verify if the pack was transacted by the End User, the type of transaction performed and then execute a verify operation to know the current pack status. If the pack is in a status different from last status generated by the End User and the date is not known, do not try to perform the undo operation.</p> <p>The identified problems must be communicated to MVO Portugal via the form <a href="#">MVOPT-TP-0022 Report of problems by End Users</a> and sent by email to <a href="mailto:alertas@mvoportugal.pt">alertas@mvoportugal.pt</a>.</p> |

## Measures to eliminate and prevent alerts

Document Number: MVOPT-RG-0006


Version: 1

Effective Date: 25-October-2019

Page 30 of 41

| #  | Alert Type  | Alert code     | Most probable causes   | Measures to eliminate alerts  |
|----|---|----------------|--|---|
| 12 | Undo can only be executed by the same user who previously set the attribute | NMVS_NC_PCK_21 | Undo transaction was performed by a user that did not perform the initial transaction.<br>Undo transactions can only be performed by the same user that performed the initial transaction. | <p>The End User must keep track of the initial transaction performed (in case it was performed by the End User itself, including date and nominated user), so the alert can be avoided.</p> <p>Before performing the undo operation, always verify if the pack was transacted by the end user, the type of transaction performed and then execute a verify operation to know the current pack status. If the pack is in a status different from last status generated by the End User and the nominated User that performed the initial transaction is not known, do not try to perform the undo operation.</p> <p>The identified problems must be communicated to MVO Portugal via the form <a href="#">MVOPT-TP-0022 Report of problems by End Users</a> and sent by email to <a href="mailto:alertas@mvoportugal.pt">alertas@mvoportugal.pt</a>.</p> |
| 13 | Input data does not match the XML schema definition                         | NMVS_TE_XM_02  | Undo manual transactions performed without batch ID and the expiry date.   | <p>The end user systems must request the batch ID and expiry date in the undo manual transactions, as these are mandatory fields for the undo transactions.</p> <p>The identified problems must be communicated to MVO Portugal via the form <a href="#">MVOPT-TP-0022 Report of problems by End Users</a> and sent by email to <a href="mailto:alertas@mvoportugal.pt">alertas@mvoportugal.pt</a>.</p>   |



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|  | Measures to eliminate and prevent alerts |               |
|   | Document Number: MVOPT-RG-0006           | Version: 1    |
|   | Effective Date: 25-October-2019          | Page 31 of 41 |

### 3.4 Hospitals

In this sub-chapter are described the most probable causes of the alerts, when these are attributable to hospitals. If applied correctly, the measures presented to each case would eliminate the respective alerts.

| # | Alert Type           | Alert code    | Most probable causes                                    | Measures to eliminate alerts   |
|---|----------------------|---------------|---|--|
| 1 | Unknown product code | NMVS_NC_PC_01 | Manual insertion of pack data of a non-serialized pack. | <p>If the pack does not bear a 2D code, it is not under the Delegated Regulation and therefore it is not to be scanned for this purpose.</p> <p>In case the pack bears a 2D code, the End User must always read the 2D code and communicate it to the PtMVS.</p> <p>The identified problems must be communicated to MVO Portugal via the form <a href="#">MVOPT-TP-0022 Report of problems by End Users</a> and sent by email to <a href="mailto:alertas@mvoportugal.pt">alertas@mvoportugal.pt</a>.</p> |

## Measures to eliminate and prevent alerts

Document Number: MVOPT-RG-0006

Version: 1

Effective Date: 25-October-2019

Page 32 of 41

| # | Alert Type           | Alert code    | Most probable causes   | Measures to eliminate alerts  |
|---|----------------------|---------------|--|---|
| 2 | Unknown product code | NMVS_NC_PC_01 | Wrong manual insertion of the human readable elements.   | <p>The manual insertion transactions were designed for fallback scenarios and therefore not to be used on a regular basis, as the probability of manual data insertions errors is very high. As such, manual transactions are to be used the least possible.</p> <p>In case of use of manual transactions, ensure that the insertion of the unique identifier elements (GTIN and serial number) are correctly inserted. The PtMVS provides 3 attempts to insert incorrect information before generating a L5 alert.</p> <p>The identified problems must be communicated to MVO Portugal via the form <a href="#">MVOPT-TP-0022 Report of problems by End Users</a> and sent by email to <a href="mailto:alertas@mvoportugal.pt">alertas@mvoportugal.pt</a>.</p> |
| 3 | Unknown product code | NMVS_NC_PC_01 | <p>Alerts caused by scanner misconfiguration (problems in the scanner device and/or in the associated software):</p> <p>Wrong identification of the 2D elements (e.g. consider the NN as the GTIN).</p> <p>Wrong separation of the elements in the 2D code (e.g. consider a GTIN with less/more than 14 digits).</p> | <p>Ensure correct scanner/software configuration (e.g. group separators). Involve scanner/software suppliers if necessary.</p> <p>The scanner/software must transfer the exact content of the 2D code, with no interpretations. More information on scanner configuration can be found <a href="#">here</a>.</p> <p>The identified problems must be communicated to MVO Portugal via the form <a href="#">MVOPT-TP-0022 Report of problems by End Users</a> and sent by email to <a href="mailto:alertas@mvoportugal.pt">alertas@mvoportugal.pt</a>.</p>  |

## Measures to eliminate and prevent alerts

Document Number: MVOPT-RG-0006

Version: 1

Effective Date: 25-October-2019

Page 33 of 41

| # | Alert Type                                | Alert code     | Most probable causes  | Measures to eliminate alerts  |
|---|---|----------------|---|---|
| 4 | Failed to find a batch for the given data | NMVS_FE_LOT_03 | <p>Alerts caused by scanner misconfiguration (problems in the scanner device and/or in the associated software):</p> <p>Wrong interpretation of upper case/lower case (e.g. the batch id is "A1B2C3" but is read by the scanner as "a1b2c3").</p> <p>No read of special characters in batch id (e.g. the batch id "12345-B1" is read by the scanner as "12345B1").</p> <p>Wrong identification of the 2D elements (e.g. the serial number is read by the scanner or transferred to the NMVS as being the batch id).</p> <p>Wrong separation of the elements in the 2D code (e.g. consider a concatenation of the batch id and the NN as the batch id).</p> <p>The speed of the scanner reading is not adjusted. In cases of a sale with more than one pack, the scanner mixes the elements of the packs (e.g. in the same transaction, considers the GTIN of one pack and the batch id of another).</p> | <p>Ensure correct scanner/software configuration (e.g. character set conversion). Involve scanner/software suppliers if necessary.</p> <p>The scanner/software must transfer the exact content of the 2D code read, with no interpretations. More information on scanner configuration can be found <a href="#">here</a>.</p> <p>The identified problems must be communicated to MVO Portugal via the form <a href="#">MVOPT-TP-0022 Report of problems by End Users</a> and sent by email to <a href="mailto:alertas@mvoportugal.pt">alertas@mvoportugal.pt</a>.</p> |

## Measures to eliminate and prevent alerts

Document Number: MVOPT-RG-0006

Version: 1

Effective Date: 25-October-2019

Page 34 of 41

| # | Alert Type            | Alert code    | Most probable causes  | Measures to eliminate alerts  |
|---|-----------------------|---------------|---|---|
| 5 | Unknown serial number | NMVS_NC_PC_02 | <p>Alerts caused by scanner misconfiguration (problems in the scanner device and/or in the associated software):</p> <p>Wrong interpretation of upper case/lower case (e.g. the serial number is "A1B2C3" but is read by the scanner as "a1b2c3").</p> <p>No read of special characters in the serial number (e.g. the serial number is "12345-B1" but is read by the scanner as "12345B1").</p> <p>Wrong identification of the 2D elements (e.g. the serial number is read by the scanner or transferred to the NMVS as being the batch id).</p> <p>Wrong separation of the elements in the 2D code (e.g. consider a concatenation of the serial number and the NN as the serial number).</p> <p>The speed of the scanner reading is not adjusted. In cases of a sale with more than one pack, the scanner mixes the elements of the packs (e.g. in the same transaction, considers the GTIN of one pack and the batch id of another).</p> | <p>Ensure correct scanner/software configuration. Involve scanner/software suppliers if necessary. The scanner/software must transfer the exact content of the 2D code, with no interpretations. More information on scanner configuration can be found <a href="#">here</a>.</p> <p>The identified problems must be communicated to MVO Portugal via the form <a href="#">MVOPT-TP-0022 Report of problems by End Users</a> and sent by email to <a href="mailto:alertas@mvoportugal.pt">alertas@mvoportugal.pt</a>.</p> |

## Measures to eliminate and prevent alerts

Document Number: MVOPT-RG-0006

Version: 1

Effective Date: 25-October-2019

Page 35 of 41

| # | Alert Type   | Alert code     | Most probable causes   | Measures to eliminate alerts  |
|---|--|----------------|--|---|
| 6 | Expiry date does not match the date held in the NMVS | NMVS_FE_LOT_12 | <p>Alerts caused by scanner misconfiguration (problems in the scanner device and/or in the associated software):</p> <p>Read the expiry date in reverse order (i.e. instead of reading YYMMDD, the scanner reads DDMMYY).</p> <p>The scanner/software considers the date in which the transaction occurred and not the date encoded into the 2D code (e.g. the date in the 2D code is 220415, but the scanner/software retrieves 190901).</p> <p>The scanner/software converts the date in the 2D code into the last day of the month or the last day of the previous month (e.g. the date in the 2D code is 220415, but the scanner/software converts to 220430).</p> <p>The scanner/software converts the date in the 2D code into the first day of the month (e.g. the date in the 2D code is 220415, but the scanner/software converts to 220401).</p> | <p>Ensure correct scanner/software configuration (e.g. interface). Involve scanner/software suppliers if necessary.</p> <p>The scanner/software must transfer the exact content of the 2D code, with no interpretations. More information on scanner configuration can be found <a href="#">here</a>.</p> <p>The identified problems must be communicated to MVO Portugal via the form <a href="#">MVOPT-TP-0022 Report of problems by End Users</a> and sent by email to <a href="mailto:alertas@mvoportugal.pt">alertas@mvoportugal.pt</a>.</p> |

## Measures to eliminate and prevent alerts

Document Number: MVOPT-RG-0006

Version: 1

Effective Date: 25-October-2019

Page 36 of 41

| # | Alert Type  | Alert code     | Most probable causes  | Measures to eliminate alerts  |
|---|---|----------------|---|---|
| 7 | The batch ID does not match the serial number in the NMVS | NMVS_FE_LOT_13 | <p>Alerts caused by scanner misconfiguration (problems in the scanner device and/or in the associated software):</p> <p>Wrong interpretation of upper case/lower case (e.g. the batch id is "A1B2C3" but is read by the scanner as "a1b2c3").</p> <p>Unread special characters in batch id (e.g. the batch id "12345-B1" is read by the scanner as "12345B1").</p> <p>Wrong identification of the 2D elements (e.g. the serial number is read by the scanner or transferred to the NMVS as being the batch id).</p> <p>Wrong separation of the elements in the 2D code (e.g. consider a concatenation of the batch id and the NN as the batch id).</p> <p>The speed of the scanner reading is not adjusted. In cases of a sale with more than one pack, the scanner mixes the elements of the packs (e.g. in the same transaction, considers the GTIN of one pack and the batch id of another).</p> | <p>Ensure correct scanner/software configuration (e.g. character set configuration). Involve scanner/software suppliers if necessary.</p> <p>The scanner/software must transfer the exact content of the 2D code, with no interpretations. More information on scanner configuration can be found <a href="#">here</a>.</p> <p>The identified problems must be communicated to MVO Portugal via the form <a href="#">MVOPT-TP-0022 Report of problems by End Users</a> and sent by email to <a href="mailto:alertas@mvoportugal.pt">alertas@mvoportugal.pt</a>.</p> |

## Measures to eliminate and prevent alerts

Document Number: MVOPT-RG-0006

Version: 1

Effective Date: 25-October-2019

Page 37 of 41

| # | Alert Type               | Alert code     | Most probable causes   | Measures to eliminate alerts   |
|---|--------------------------|----------------|--|--|
| 8 | Pack is already inactive | NMVS_NC_PCK_22 | Repetition of a decommissioning operation on an already decommissioned pack. The pack was initially decommissioned by the pharmacy itself. | Before performing the decommission operation, always perform a verify operation. If the pack is already inactive, do not try to decommission again.<br>The identified problems must be communicated to MVO Portugal via the form <a href="#">MVOPT-TP-0022 Report of problems by End Users</a> and sent by email to <a href="mailto:alertas@mvoportugal.pt">alertas@mvoportugal.pt</a> . |

## Measures to eliminate and prevent alerts

Document Number: MVOPT-RG-0006

Version: 1

Effective Date: 25-October-2019

Page 38 of 41

| # | Alert Type  | Alert code     | Most probable causes   | Measures to eliminate alerts   |
|---|---|----------------|--|--|
| 9 | Defined timeframe between setting this property and the undo was exceeded | NMVS_NC_PCK_20 | <p>Undo transactions was performed after the 10 days immediately after the initial transaction.</p> <p>Undo operations can only be performed in the 10 days immediately after the initial transaction.</p> | <p>The End User must keep track of the initial transaction performed (in case it was performed by the End User itself, including date and nominated user), so the 10 days timeframe can be managed, and the alert can be avoided.</p> <p>Before performing the undo operation, always verify if the pack was transacted by the End User, the type of transaction performed and then execute a verify operation to know the current pack status. If the pack is in a status different from last status generated by the End User and the date is not known, do not try to perform the undo operation.</p> <p>The identified problems must be communicated to MVO Portugal via the form <a href="#">MVOPT-TP-0022 Report of problems by End Users</a> and sent by email to <a href="mailto:alertas@mvoportugal.pt">alertas@mvoportugal.pt</a>.</p> |



## Measures to eliminate and prevent alerts


Document Number: MVOPT-RG-0006

Version: 1

Effective Date: 25-October-2019

Page 39 of 41

| #  | Alert Type  | Alert code     | Most probable causes   | Measures to eliminate alerts  |
|----|---|----------------|--|---|
| 10 | Undo can only be executed by the same user who previously set the attribute | NMVS_NC_PCK_21 | Undo transaction was performed by a user that did not perform the initial transaction.<br>Undo transactions can only be performed by the same user that performed the initial transaction. | <p>The End User must keep track of the initial transaction performed (in case it was performed by the End User itself, including date and nominated user), so the alert can be avoided.</p> <p>Before performing the undo operation, always verify if the pack was transacted by the end user, the type of transaction performed and then execute a verify operation to know the current pack status. If the pack is in a status different from last status generated by the End User and the nominated User that performed the initial transaction is not known, do not try to perform the undo operation.</p> <p>The identified problems must be communicated to MVO Portugal via the form <a href="#">MVOPT-TP-0022 Report of problems by End Users</a> and sent by email to <a href="mailto:alertas@mvoportugal.pt">alertas@mvoportugal.pt</a>.</p> |
| 11 | Input data does not match the XML schema definition                         | NMVS_TE_XM_02  | Undo manual transactions performed without batch ID and the expiry date.   | <p>The end user systems must request the batch ID and expiry date in the undo manual transactions, as these are mandatory fields for the undo transactions.</p> <p>The identified problems must be communicated to MVO Portugal via the form <a href="#">MVOPT-TP-0022 Report of problems by End Users</a> and sent by email to <a href="mailto:alertas@mvoportugal.pt">alertas@mvoportugal.pt</a>.</p>   |

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|---|--|---------------|
|  | Measures to eliminate and prevent alerts |               |
|   | Document Number: MVOPT-RG-0006           | Version: 1    |
|   | Effective Date: 25-October-2019          | Page 40 of 41 |

## 4. Contacts

For the purpose of communicating with MVO Portugal regarding alerts, the following points of contact are to be used:

- Email: [alertas@mvoportugal.pt](mailto:alertas@mvoportugal.pt);
- Phone number: +351 211 608 378 (local call cost).

## 5. Definitions

| Term/Acronym        | Definition   |
|---------------------|--|
| EMVS                | European Medicines Verification System. The European system for medicines verification consisting of the European Hub, the NMVS, the interface between those two, and the interfaces to the manufacturer / parallel distributor systems, to the wholesaler systems and to the pharmacy systems.  |
| EU Hub              | The subsystem of the European Medicines Verification System that serves as a gateway for the transmission of manufacturer and parallel importer data to the national systems. Furthermore; data reconciliation on repackaging activities is performed on the EU Hub.   |
| End User            | End User shall mean any wholesaler, pharmacy, hospital or other person authorized or entitled to supply medicinal products to the public as foreseen under the EU Directive on Falsified Medicines and the Delegated Regulation.   |
| IQE                 | Integrated Quality Environment.  |
| ITE                 | Integrated Test Environment.   |
| IT Service Provider | The service provider that delivers the interface between the End User system and PTMVS. Is contracted by the End User.   |
| MAH                 | Marketing Authorisation Holder.  |
| NCA                 | National Competent Authority (In Portugal, INFARMED I.P.).   |
| NN                  | National Reimbursement Number (also known as NHRN).  |
| PIAH                | Parallel Import Authorisation Holder.  |
| PTMVO or MVOPT      | Portuguese Medicines Verification Organisation.  |
| PTMVS               | Portuguese Medicines Verification System. A system in the European Medicines Verification landscape that serves as the verification platform for Portugal. The End Users registered (Pharmacies, Wholesalers, Hospitals or Other kind of End Users in the Portuguese context) check the authenticity of a product using a connection to this system. |



## Measures to eliminate and prevent alerts

Document Number: MVOPT-RG-0006

Version: 1

Effective Date: 25-October-2019

Page 42 of 41

| Term/Acronym | Definition   |
|--------------|--|
| SOP          | Standard Operational Procedure.                                      |
| User         | A specific person that has authorized access to the End User system. |

## Measures to eliminate and prevent alerts

Document Number: MVOPT-RG-0006

Version: 1

Effective Date: 25-October-2019

Page 43 of 41

## 6. Related documents

| Document Identification | Title  |
|-------------------------|--|
| MVOPT-RG-0007           | Medidas para eliminação e prevenção de alertas                                       |
| MVOPT-TP-0022           | Report of problems by End Users  |
| MVOPT-TP-0023           | Reporte de problemas por Utilizadores Finais   |
| MVOPT-TP-0024           | Report of problems by MAH_PIAH   |
| MVOPT-TP-0025           | Reporte de problemas por TAIM_AIP  |
| MVOPT-TP-0026           | Non-FMD products released to the Portuguese market                                   |
| MVOPT-TP-0027           | Reporte de lotes serializados que não se encontram ao abrigo do Regulamento Delegado |