Implementing NPSA Requirements: Syringe drivers

A Resource to support the implementation of NPSA recommendations:
- Rapid Response Report 019: Safer ambulatory syringe drivers 16 December 2010

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Introduction and Scope

This resource is one of a series produced by the clinical and community health team of the East and South East England Specialist Pharmacy Services. These resources aim to support NHS organisations and practitioners from all sectors of care in implementing and reviewing medication-related requirements published by the NPSA to ensure that they are embedded in practice over time. Many of the items cited in the resource are a collation of information provided by colleagues who have implemented the NPSA publications.

This resource provides information on the implementation of the NPSA publication (for a summary of the requirements please see Appendix 1):

- Rapid Response Report (RRR) Safer ambulatory syringe drivers 16 December 2010

The resource will be routinely updated to incorporate new information. If you have any comments or examples of implementation that you would like to share as a part of a future update, please send these to Nina Barnett nina.barnett@nhs.net

Search strategy

This resource was compiled using:

- Information available via the NPSA web-site (www.npsa.nhs.uk)
- Information from other known web-based sources NHS Evidence (www.evidence.nhs.uk/)
- National Prescribing Centre (www.npc.co.uk)
- and NPCi (www.npci.org.uk)
- Clinical domain of the East and South East Specialist Pharmacy Services (www.londonpharmacy.nhs.uk/clinical)
- UK Clinical Pharmacy Association (www.ukcpa.org.uk) nil on website, nil on May 2011 abstracts
- RPS (www.rpharms.com)
- Collation of feedback from specific requests to acute trusts and PCTs across London, East and South East England
- Internet searches using Google search engine. Search terms used included: Syringe drivers NPSA
- A specific Regional MI query were undertaken: EMBASE, CINAHL, BNI and PHARMLINE search
- Contact with palliative care network
How to use this resource

We recognise that some organisations will have completed all the requirements and we hope that using the resources may offer an opportunity to revisit processes or to assure that they are in place. For those working with interim arrangements, this resource is designed to support implementation, giving you access to resources to facilitate your local processes.

Appendix 1 summarises the NPSA RRR019. The information to support implementation of these documents is divided into 3 sections:

A. Impact Assessment of the Alert on care pathways (delivered and commissioned by the organisation)
   A1 Incorporation of requirements into processes for service delivery

B. Implementation at service delivery levels
   B1 Incorporation of requirements into processes for service delivery
   B2 Communication mechanisms and training

C. Risk Assessment & Evaluation and Monitoring of implementation
   C1 Audit examples: Entries show the audit summaries. Contacts listed may be able to provide specific audit tools and templates used.
   C2 Published articles

The references and examples are numbered to allow cross referencing where resources may provide information that covers more than one of the sections above.

If you have any further examples of documents that you would like to share, please email us at nwlh-tr.clinicalpharmacy@nhs.net

Disclaimer: Web-site addresses given in this document were correct at time of writing. If you find the links no longer work, we suggest you attempt accessing the Home page of the site and searching from there. Although the contents have been examined for relevance, inclusion of a reference or its source does not necessarily guarantee the quality and accuracy of its content. Users of this resource will need to satisfy themselves that use of the reference is appropriate for their purposes.

Acknowledgements
This resource would not have been possible without the contributions from NHS pharmacy teams across the geography covered by the East and South East Specialist Pharmacy Services. We would like to express our thanks to those that have kindly agreed to share their work with us.
## Section A: Strategic Aspects

<table>
<thead>
<tr>
<th>Reference Number</th>
<th>Resource Title</th>
<th>What it contains</th>
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<tr>
<td>A1.1</td>
<td>Rapid response safer ambulatory syringe drivers</td>
<td>Stepwise list of alert actions needed to implement RRR019, issues identified after 6 months</td>
<td>North West London Hospitals Trust Palliative Care, McKinley T34 issues</td>
<td><a href="mailto:Sylvia.kehalew@nhs.net">Sylvia.kehalew@nhs.net</a></td>
</tr>
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# Section B: Implementation at Service Delivery levels

## B1

<table>
<thead>
<tr>
<th>Reference Number</th>
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</table>
| B1.1             | Guideline for the use of Graseby syringe drivers for subcutaneous route in palliative care (January 2006) | The 23-page guideline has information and examples about:  
  ⇒ General equipment needed  
  ⇒ Drug compatibility, combination and prescribing issues  
  ⇒ Prescription and checklist  
  ⇒ Infusion sites  
  ⇒ Drug licensing issues  
  ⇒ Recommended “Tool Box” available within the settings where syringe drivers are in use  
  ⇒ Care and Maintenance  
  ⇒ Troubleshooting | Anglian Cancer Network Link                                                      | Paula Wilkinson (Chief Pharmacist Mid-Essex PCT):  
  Paula.Wilkinson@midessexpct.nhs.uk                                                                 |
| B 1.2            | Syringe driver management policy and procedures (2006)                           | This 53-page policy covers the following:  
  ♦ Training and competency standard  
  ♦ Competency framework  
  ♦ Access and safety of equipment  
  ♦ Graseby MS16A procedure  
  ♦ Syringe driver documentation  
  ♦ Patient information leaflet  
  ♦ Audit plan and tools | Croydon PCT Link  
  Link                                                                 | Available at:  
  www.croydon.nhs.uk/aboutus/policiesandprocedures/azofcurrentpolicies/Documentssyringedriverpolicyadults.doc |
| B1.3             | Syringe driver charts (May 2009)                                                | This entry relates to a message query from 27th May 2009 regarding the introduction of syringe driver charts. There are three helpful replies including a copy of policy document that shows an example of a chart. | UKCPA Pain Management Message Board (UKCPA members only)  
  www.ukcpa.org.uk within the message board area for Pain Management. Contacts for the query and replies can also be accessed here. |
| B1.4 | Syringe driver guidelines and charts | Worthing and Southlands NHS Trust have introduced a syringe driver policy for use of Graseby drivers. Palliative care team at Chichester hospital are currently updating their protocol (not yet available). They obtained syringe driver charts from Mckinley which were ordered and held by the equipment library. Mckinley also provided nurse handouts, protocols, pocket guides. | Western Sussex Hospitals NHS Trust (Worthing Hospital) [Link] | Gus Fernandez Medicine information on 01903 285222 extension 5471 [Medicines.information@wsh.t.nhs.uk] Palliative care team Pearl Green 01243 788122 ex 2508 | Christopher Donnelly 07500047676 (all areas education) Hellie King 07876783094 (London and south east region) |
| B1.5 | Syringe driver instruction and administration charts with competency framework | Syringe driver competency framework which accompanies formal syringe driver training, with syringe driver instruction and administration charts for use in the community. Mandatory medicines management packages contains a module on high risk drugs (which includes syringe driver medications). | Surrey Community Health [SD Daily Admin Chart, SD Instruction Chart, SD Checklist] | [nww.surreycommunityhealth.nhs.uk/pharmacy Louise Robinson louise.robinson1@nhs.net Older Persons Lead Pharmacist SCH] |
| B 1.7 | Syringe driver guidelines Adapted from work undertaken by Derby Burton Cancer Network | Interim update of syringe driver policy to account for NPSA RRR019 recommendations. | Derby Burton Cancer network, Derby city PCT [Link] | [www.derbygpvts.co.uk/.../Colin%20Ward%20-%20Therapeutics.ppt] |
B1.8 Protocol for the use of the Mckinley T34 syringe pump for continuous subcutaneous infusion in adults and children with palliative and end of life care needs. DRAFT protocol (for reference only) to be tested on inpatient palliative care wards and modified before rollout across the trust to provide a safe and consistent approach to syringe driver use. Central London Community Healthcare Link Jo.noble-gresty@nhs.net

B1.9 STANDARD OPERATING PROCEDURE For the administration and management of subcutaneous medication via the T34 syringe driver. Provides framework for registered nursing staff on the safe management and care of patients who are receiving continuous subcutaneous medication via a syringe driver. NHS Devon Link http://www.devonpct.nhs.uk/InfoPointLibrary/Clinical_policies/CLIN%20%20Syringe%20Driver%20SOP.pdf

B 1.10 Nursing practice guidelines on THE USE OF SYRINGE DRIVERS IN PALLIATIVE CARE November 2011. Policy for moving from Graseby to Mckinley syringe drivers including training, procedure for use and a monitoring chart (appendix 5). North West London Hospitals Trust Link Sylvia.kefyalew@nhs.net Palliative care nurse and practice educator

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<th>B2</th>
<th>Communication mechanisms and training</th>
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<td>Reference Number</td>
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<tr>
<td>B2.1</td>
<td>Clinical Safety Watch</td>
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<tr>
<td>B2.2</td>
<td>Factsheet 1 on palliative care</td>
</tr>
<tr>
<td>B 2.3</td>
<td>North West London Cancer Network syringe driver guidelines</td>
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</table>
Section C: Risk Assessment & Evaluation and Monitoring of implementation

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<tr>
<th>C1</th>
<th>Audit examples</th>
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<tbody>
<tr>
<td>These audits have mainly been accessed via pre-registration pharmacist trainee audits published across London, East and South East England.</td>
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<tr>
<td>C1.1</td>
<td>Safer Ambulatory syringe driver devices in End of Life Care across the East Midlands</td>
<td>Includes syringe drivers currently in use for patients at the end of life in both community and hospital settings, plans to review use of Graseby MS16A or MS26 syringe drivers and clinical incidents in previous 12 months Summary of audit findings from five counties around RRR implementation 1. Please list the syringe drivers currently in use for patients at the end of life in both community and hospital settings. 2. For services using Graseby MS16A or MS26 syringe drivers, are there any plans in your locality to review the use of these syringe drivers. If so, please provide the contact details of the lead for this review. 3. Please supply details if you are aware of any clinical incidents relating to the use of any syringe drivers in the last 12 months.</td>
<td>East Midlands Audit Link</td>
<td><a href="http://www.excellence.eastmidlands.nhs.uk/welcome/improving-care/end-of-life-care/delivering-safer-end-of-life-care/?locale=en">http://www.excellence.eastmidlands.nhs.uk/welcome/improving-care/end-of-life-care/delivering-safer-end-of-life-care/?locale=en</a></td>
</tr>
<tr>
<td>C1.2</td>
<td>Briefing for chief executives</td>
<td>Operational and cost implications of the alert</td>
<td>Clinical Knowledge summaries website</td>
<td><a href="http://www.cks.nhs.uk/media/rrr_ambulatory_syringe_drivers_exec.pdf">http://www.cks.nhs.uk/media/rrr_ambulatory_syringe_drivers_exec.pdf</a></td>
</tr>
<tr>
<td>C2.1</td>
<td>Safer ambulatory syringe drivers: experiences of one acute hospital trust</td>
<td>Outlines the experiences of one acute hospital trust in identifying and trialling ambulatory syringe drivers to potentially adopt, and in implementing the selected driver and training staff in its use. Insight into the challenges of this change in practice</td>
<td>International Journal of Palliative Nursing 2011, Vol 17, No 2</td>
<td>Alison Freemantle, Daniel Clark, Vincent Crosby</td>
</tr>
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Appendix 1 Summary of the NPSA requirements (details available at www.npsa.nhs.uk)


Issue date 16 December 2010 Action by 16 December 2011

While the majority of syringe drivers and pumps used in healthcare have rate settings in millilitres (ml), some older types of ambulatory syringe drivers have rate settings in millimetres (mm) of syringe plunger travel. This is not intuitive for many users and not easy to check. Errors include the wrong rate of infusion caused by inaccurate measurement of fluid length or miscalculation or incorrect rate setting of the device.

NHS organisations should:

1. Develop a purchasing for safety initiative that considers the following safety features before ambulatory syringe drivers are purchased:
   a) rate settings in millilitres (ml) per hour;
   b) mechanisms to stop infusion if the syringe is not properly and securely fitted;
   c) alarms that activate if the syringe is removed before the infusion is stopped;
   d) lock-box covers and/or lock out controlled by password;
   e) provision of internal log memory to record all pump events.

2. Agree an end date to complete the transition between existing ambulatory syringe drivers and ambulatory syringe drivers with additional safety features (as soon as locally feasible, and within five years of this RRR).

3. Take steps to reduce the risks of rate errors while older designs of ambulatory syringe drivers remain in use, based on a locally developed risk reduction plan which may include: raising awareness, providing information to support users with rate setting, and using lock-boxes.

4. Take steps to reduce the risks during any transition period when both types of design are in use, including:
   a) reviewing and updating policies and protocols to include the safe operation of all designs of ambulatory syringe driver in local use;
   b) revising user training programmes to include the safe operation of all designs of ambulatory syringe driver in local use.