A driver diagram is used to conceptualise an issue and to determine its system components which will then create a pathway to achieve the goal. Primary Drivers are system components which will contribute to moving the primary outcome. Secondary drivers are elements of the associated primary driver. They contain change concepts that can be used to create projects that will affect the primary driver.
Scottish Patient Safety Programme
Medicines Management Driver Diagram and Change Package

Outcomes

Primary Drivers (processes, rules of conduct, structure)

- Reliable Medicines Management Processes

Secondary Drivers (components, activities leading to Pr. Dr.)

- Use standardised protocols and algorithms for high risk meds
- Routine and reliable patient and laboratory monitoring
- Identify high risk areas using FMEA
- Pharmacy consultation service
- Identify patients at risk with high-alert medications
- Standardise recovery protocols (e.g. opiate over-sedation)

Coordination of care

- Accuracy of medicines at the interface
- “One stop” delivery system
- Reliable in-hospital handoffs
- Communication with primary care
- High risk medicines management services
- Patient and family education
- Self management protocols

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## Scottish Patient Safety Programme
### Medicines Management Driver Diagram and Change Package

<table>
<thead>
<tr>
<th>Secondary Drivers</th>
<th>Change Concepts and Change Ideas for PDSA Testing</th>
</tr>
</thead>
</table>
| **Use standardised protocols and scales for high risk meds** (*anticoagulation, insulin, opiates, chemotherapy*) | *Bolded items are required elements of the SPSP*  
Limit the number of protocols available at point of order writing to reduce variation.  
Generally, most of the eligible patients can be treated using one or two protocols  
Allow certain drugs to be used only by protocol  
Require all elements of the order: dose, strength, units (metric), route, frequency, and rate before processing  
Use guided dose algorithms (low molecular weight heparin, heparin nomogram)  
Use an automated dose reduction plan. Plan should include dose reduction for elderly and reduction based on patient need or change in VS.  
Provide pre-printed calculation sheets  
Use anticoagulation flow sheets  
Administer warfarin at standard time late in the day in order to enable clinicians to respond to INR results (but schedule administration time apart from nursing break times)  
High risk medicines management services |
| Routine and reliable laboratory monitoring                                          | Make lab results available on the ward within 2 hours, or monitor at the bedside  
Plot laboratory (INR) results versus dose changes on run or control chart to display trends  
Connect medication orders to lab results for proper dosing  
Direct lab results to the clinician who needs the information to take action as needed. |
| **Identify high risk areas using FMEA**                                            | Identify high risk areas using Failure Modes and Effects Analysis (FMEA)                                                                                                                                                                               |
| Pharmacy consultation service                                                      | Develop ward based Pharmacist anticoagulant service  
Use anticoagulant dosing service or "clinic" (inpatient & outpatient)                                                                                                                        |
| Standardise recovery protocols (e.g. opiate over-sedation)                         | Standardise recovery protocols (e.g. reversal agents)  
Have Vitamin K dosing guidelines or pre-typed protocol                                                                                                                                             |

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<table>
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<tr>
<th>Secondary Drivers</th>
<th>Change Concepts and Changes for PDSA Testing</th>
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<tbody>
<tr>
<td><em>Accuracy of medicines at the interface</em></td>
<td><em>Bolded items are required elements of the SPSP</em></td>
</tr>
<tr>
<td>Create a standardised form that lists all the medicines the patient was taking at home.</td>
<td><strong>Accuracy of medicines at the interface</strong></td>
</tr>
<tr>
<td>Set up the form to be used to indicate which medicines should be continued, changed or discontinued, include space for the doctor to document reasons for omitting medicines.</td>
<td></td>
</tr>
<tr>
<td>Establish a clear reconciliation process by starting your medication reconciliation with prescription and non-prescription drugs only; then begin reconciling herbal, vitamin, and other supplements.</td>
<td></td>
</tr>
<tr>
<td>Provide additional space on the medicines list/order form to list herbal, vitamin, and other supplements, perhaps with a default order not to continue them. That way, these supplements may be considered reconciled without a call to the doctor.</td>
<td></td>
</tr>
<tr>
<td>Begin the process of reconciling medicines on admission with patients at highest risk.</td>
<td></td>
</tr>
<tr>
<td>Follow the same reconciliation procedure for surgical patients: Compare the preoperative medicine orders to the postoperative medicines and reconcile any discrepancies.</td>
<td></td>
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<tr>
<td>Develop and use a standardised form that captures medicines that may have been ordered since admission and is used when the patient is transferred.</td>
<td></td>
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<tr>
<td>Develop policies so that when a patient is transferred out of any ICU or high dependency unit medicines that are not appropriate for the next setting are discontinued automatically.</td>
<td></td>
</tr>
<tr>
<td>Create a standardised form that lists initial home medicines, all the medicines the patient has been receiving in hospital, and includes space on the form for doctors to document the reasons for omitting certain medicines upon discharge from hospital.</td>
<td></td>
</tr>
<tr>
<td>Attach the pre-admission medicines list to the discharge orders form. Patient may need to discontinue some medicines being taken at home.</td>
<td></td>
</tr>
<tr>
<td>Provide the patient with a comprehensive list of all medicines — those being taken before admission plus the new medicines from the discharge orders. Clearly indicate the name of each drug, its purpose, and the instructions for taking the medicines, as well as any instructions for discontinuing use.</td>
<td></td>
</tr>
<tr>
<td>Work with patient to carry an accurate list of medicines all the time.</td>
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</tbody>
</table>

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| **Scottish Patient Safety Programme**  
| Medicines Management Driver Diagram and Change Package |
| --- | --- |
| **“One stop” delivery system** | Develop educational materials and sessions at a literacy level that patients can understand.  
Give patients a copy of the medicine administration record each day during hospital stay.  
Educate the patient about changed medicines.  
Where appropriate, have patient self-administer medicines during hospital stay.  
Format anticoagulation flow sheet and orders to follow patient through transitions from hospital to skilled care to home. |
| **Reliable in-hospital handoffs** | “One stop” delivery system |
| **Communication with primary care** | Develop reliable in-hospital handoffs to primary care.  
Develop communication process with primary care. |
| **Patient and family education** | Use “Yellow book” for all patients on warfarin.  
Develop educational materials and sessions at a literacy level that patients can understand.  
Work with patient to carry an accurate list of medicines all the time.  
Give patients a copy of the medicine administration record each day during hospital stay.  
Educate the patient about medicines as they are changed.  
Provide patients with a medicines card that they will carry with them after their hospital stay.  
Pharmacists participate in discharge counselling with patients. |
| **Self management protocols** | Patient self-administer medicines during hospital stay when appropriate.  
Use patient-directed warfarin dosing when appropriate. |

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