## Ideal Features of eMedRec Solution Checklist

(Adapted with permission from the MARQUIS Manual 2014 p. 77-80)

### Ideal Features of eMedRec Solution Checklist

1. **Describe the current IT landscape within your organization:**

   - [ ] Use of Computerized Provider Order Entry (CPOE).
   - [ ] Use of an inpatient electronic Medical Record (EMR).
   - [ ] Use of an electronic Medication Administration Record (eMAR).
   - [ ] Use of an eMedRec tool.
   - [ ] Investigate plans to change the current health information systems in the next 1-2 years.
   - [ ] Investigate organizational willingness to invest in any new systems.

2. **Ideal features of an eMedRec tool**

   - [ ] Displays current medications and eBPMH lists side by side to facilitate comparison.
   - [ ] Allows filters for sorting medications for example, by therapeutic class, most recent date prescribed, ordering physician, discontinued medications, etc.
   - [ ] Displays medication history (current and previous, active and discontinued medications), ideally medications are displayed on a timeline.
   - [ ] Allows modification of medications: continue, discontinue, hold (optional), or change from the same screen. Ideally, the system is integrated with CPOE (if applicable) so that new medications can be prescribed as well.
   - [ ] Clearly identifies automatic formulary substitutions and automatically reverts these to original medications during discharge eMedRec.
   - [ ] For pre-admission accounts, allows eMedRec to occur any time before schedule re-visit (e.g., surgery).

3. **Access to electronic source of preadmission medication information**

   - [ ] Community pharmacy prescription data.
   - [ ] Medication lists from ambulatory EMRs.
   - [ ] Discharge medication orders from recent hospitalizations at participating hospitals and/or hospitals in the region.
   - [ ] Medication lists from patient personal health records (ideally linked to the ambulatory EMR) and electronic provincial medication record.
## Ideal Features of eMedRec Solution Checklist

### 4. Facilitates the comparison of various sources of preadmission medication information
- Identifies the source(s) of information for each medication.
- Displays dates prescribed/ordered as appropriate for each source.
- Highlights differences in doses frequencies, routes, and formulations for each medication.
- Allows sorting of medication by name, class, date and source.

### 5. Ability to show patient adherence to medications
- Calculation of medication possession ratio and/or graphs of medication possession time based on pharmacy fill and refill data.
- Access to any documented information from EMRs and PHRs regarding medication adherence includes rational, side effects, intolerances etc.

### 6. Documentation of the electronic Best Possible Medication History (eBPMH)
- Ability to create a eBPMH separate from the sources on which it is based
- Ability to pull medications from electronic sources into an eBPMH (with or without changes).
- Ability to add new medications into the eBPMH based on other (non-electronic) sources of information.
- Ability to update the eBPMH at any time during the hospitalization.
- Ability to document the quality of the eBPMH (from a list of choices) in the opinion of the history-taker and for that information to be clearly visible to any other provider who pulls up the medication list.
- Ability to document the sources of information used to create the eBPMH from a list of coded choices and for that information to be clearly visible to any other provider who pulls up the list.
- Ability to update the eBPMH at any time during the hospitalization.
- Audit trail to document changes to the eBPMH made during the course of hospitalization, including when and by whom (person and role).

### 7. Facilitation of eBPMH Sign-off
- Sign-off that the eBPMH is ready for comparison to the admission orders (reconciliation).
- Ability to document verification of BPMH by a second clinician.
<table>
<thead>
<tr>
<th></th>
<th>Ideal Features of eMedRec Solution Checklist</th>
</tr>
</thead>
<tbody>
<tr>
<td>8.</td>
<td>Facilitation of admission orders based on the eBPMH</td>
</tr>
<tr>
<td></td>
<td>![ ] Doc Document the planned action on admission for each eBPMH medication: continue without changes, continue with changes, substituted for a different medication, temporarily hold, discontinue.</td>
</tr>
<tr>
<td></td>
<td>![ ] Ability for continued medications to link to the admission order entry process.</td>
</tr>
<tr>
<td>9.</td>
<td>Facilitation of reconciliation at admission</td>
</tr>
<tr>
<td></td>
<td>![ ] Ability to compare and flag differences between eBPMH and admission orders.</td>
</tr>
<tr>
<td></td>
<td>![ ] Document intentional reasons for changes from the eBPMH to admission orders.</td>
</tr>
<tr>
<td></td>
<td>![ ] Modify admission orders as needed to resolve unintentional discrepancies.</td>
</tr>
<tr>
<td></td>
<td>![ ] Ability to document verification of admission orders by a second clinician.</td>
</tr>
<tr>
<td>10.</td>
<td>Facilitation of medication ordering at intra-hospital transfer</td>
</tr>
<tr>
<td></td>
<td>![ ] Compare eBPMH to current (pre-transfer) inpatient medications (e.g., differences in medications, dose route frequency of formulation highlighted).</td>
</tr>
<tr>
<td></td>
<td>![ ] The ability to order medications from eBPMH or the current pre-transfer medication list as transfer orders (with or without further modification).</td>
</tr>
<tr>
<td></td>
<td>![ ] Ability to add new medications to transfer orders (i.e., not on either list)</td>
</tr>
<tr>
<td>11.</td>
<td>Facilitation of medication reconciliation at intra-hospital transfer</td>
</tr>
<tr>
<td></td>
<td>![ ] Compare and flag differences among eBPMH, pre-transfer medications and transfer orders.</td>
</tr>
<tr>
<td></td>
<td>![ ] Document intentional reasons for changes made to transfer orders.</td>
</tr>
<tr>
<td></td>
<td>![ ] Modify transfer orders as needed to resolve unintentional discrepancies.</td>
</tr>
<tr>
<td></td>
<td>![ ] Ability to document verification of orders by a second clinician.</td>
</tr>
<tr>
<td>12.</td>
<td>Facilitation of medication ordering at hospital discharge</td>
</tr>
<tr>
<td></td>
<td>![ ] Compare eBPMH to current (pre-discharge) inpatient medications (e.g., differences in medications, dose, route, frequency of formulation highlighted).</td>
</tr>
<tr>
<td></td>
<td>![ ] The ability to order medications from eBPMH or the current pre-discharge medication list as discharge orders (with or without further modification).</td>
</tr>
<tr>
<td></td>
<td>![ ] Ability to add new medications to discharge orders (i.e., not on either list)</td>
</tr>
<tr>
<td></td>
<td>![ ] Ability to run decision support on entire discharge medication regimen (e.g., for duplicate therapy)</td>
</tr>
<tr>
<td></td>
<td>![ ] Ability to transmit electronic prescription or print and sign prescriptions at discharge (from final verified medication orders)</td>
</tr>
</tbody>
</table>
### Ideal Features of eMedRec Solution Checklist

#### 13. Tools to facilitate patient/caregiver education

- [ ] Ability to print a final discharge medication list in patient-friendly language that clearly indicates (with pictures if possible) the indications of each medication, time(s) of day to take it, number of pills/sprays, etc. with each administration, and common side effects to watch for.

- [ ] Ability to clearly display the differences between pre-admission and discharge medication regimens, including which medications are new, which have had changes in dose/frequency/route/formulation, which are to be continued without changes and which preadmission medications should be stopped.

- [ ] Ability to add standardized medication educational materials (e.g. 5 Questions to Ask About Your medications) and for high-alert medications (e.g. anticoagulants, insulin etc.)

#### 14. Tools to facilitate communication with post-discharge providers

- [ ] Clear documentation in the discharge paperwork of the discharge medication regimen, including a clear explanation of changes compared with the preadmission medication regimen and reasons for all changes.

- [ ] Ability to transmit this information electronically to post-discharge providers (e.g., to their community pharmacy, ambulatory EMR, sub-acute facility/Long-term care facility EMR, via online portal to hospital’s information systems, or through health information exchange program).

#### 15. Tools to facilitate compliance with medication reconciliation process

- [ ] Ability to track timing of BPMH documentation relative to time of admission

- [ ] Provide alerts, reminders and/or hard stops if eBPMH or reconciliation has not been completed in a timely manner.

- [ ] Ability to stop the discharge process unless eBPMH has been verified and every medication in the BPMH and current inpatient regimen have been reconciled with the discharge medication regimen.

- [ ] Ability to generate real-time reports of all patients with discharge orders completed and in need of reconciliation.

#### 16. Tools to identify high-risk patients

- [ ] Automatically identify and generate a report of patients at high-risk for medication problems (e.g., based on the number and/or classes of medication in the eBPMH in admission or discharge orders, and/or based on the number of changes from pre-admission to discharge medications) so that further action can be taken.

#### 17. Facilitation of reconciliation at hospital discharge

- [ ] Compare and flag differences among eBPMH, pre-discharge medication list and discharge orders.

- [ ] Document reasons for intentional changes made to discharge orders (e.g., compared with the eBPMH).

- [ ] Modify discharge orders as needed to resolve unintentional discrepancies.

- [ ] Ability to document verification of discharge orders by a second clinician.