A pilot study of a MEducation RAationalization (MERA) Intervention
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THE INNOVATION

Background
Medical care focused on:
- Reversing acute conditions
- Preventing long-term complications

Seriously ill or frail elderly patients:
- Often receive nonbeneficial/harmful medications
- Rarely receive comfort medications

MERA (MEdication RAationalization) approach:
- Interprofessional team to review medications and recommend changes based on goals and guidelines (Beers, STOPP, Choosing Wisely)
- Deprescribe inappropriate medications
- Prescribe comfort medications

HOW DO WE KNOW?

Effective - Patients receiving MERA had more nonbeneficial/harmful medications stopped than similar controls (3.1 vs. 0.9, p<0.001)
- Similar effect across subgroups
- Similar effect if Palliative Care following or Palliative Care refused by patient or medical team

MERA effect was durable until and beyond discharge

Time-efficient and Acceptable - Well-received by patients, family members and staff

Cost savings - Direct medication cost savings during 3 month follow-up: $1508.47 or $94.28 per 100 patient-days

CULTURE AND CARE EXPERIENCE

ETHNOCULTURE

Enrolled and completed follow-up on 53 patients

<table>
<thead>
<tr>
<th>Inclusion Criteria</th>
<th>% of patients enrolled</th>
</tr>
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<tbody>
<tr>
<td>Age &gt;80</td>
<td>41%</td>
</tr>
<tr>
<td>Cancer</td>
<td>38%</td>
</tr>
<tr>
<td>End Organ Failure</td>
<td>21%</td>
</tr>
<tr>
<td>Mean 11 home meds per patient (range 1-24)</td>
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MERA recommendations made for 90% of patients
- Very high acceptance of MERA recommendations
  - 99% acceptance from GIM teams
  - 94% acceptance from Patients

Top 5 Medication Classes (54% of all meds recommended to stop)
- Vitamins/Minerals
- Lipid Lowering Agents
- Homeopathic/Herbal Supplements
- Proton Pump Inhibitors
- Docusate

<table>
<thead>
<tr>
<th>MERA Medication Class</th>
<th># Stops Recommended</th>
<th># Patients Recommended to Stop</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vitamins/Minerals</td>
<td>55 (27%)</td>
<td>28 (53%)</td>
</tr>
<tr>
<td>Lipid Lowering Agents</td>
<td>20 (10%)</td>
<td>20 (38%)</td>
</tr>
<tr>
<td>Homeopathic/Herbal Supplements</td>
<td>14 (7%)</td>
<td>6 (11%)</td>
</tr>
<tr>
<td>Proton Pump Inhibitors</td>
<td>13 (6%)</td>
<td>13 (25%)</td>
</tr>
<tr>
<td>Docusate</td>
<td>8 (4%)</td>
<td>8 (15%)</td>
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Quotes from patients and family members:
On the rationale behind MERA
- "great forum to review medications objectively"
- "helping someone for the better"
- "nice to know that one less pill is needed,"
- "just take what's necessary, more helpful to her,"
- "finally the number of pills is not just growing,"
- "i know they have harmful effects"

On the MERA approach
- "reasonable recommendations."
- "logical suggestions...it makes sense."
- "straightforward approach,"
- "a bunch of nice, dedicated people"

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IMPAcT AND RESULTS

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<th>Meds Added</th>
</tr>
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<tbody>
<tr>
<td>Total #</td>
<td>AVG/Patient</td>
<td></td>
</tr>
<tr>
<td>162</td>
<td>3.1</td>
<td>48 13</td>
</tr>
</tbody>
</table>

Outcome of Stopped Medications

<table>
<thead>
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<th>Patients enrolled</th>
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IMPACT STORY

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LESSONS LEARNED

MEducation RAationalization (MERA) intervention is:
- Feasible
- Highly acceptable by both physicians and patients
- Effective at stopping medications

MEducation RAationalization (MERA) intervention lessons:
- Identified system issues that undermine medication rationalization
- Critical role of pharmacists in medication rationalization
- Distinct from Medication Reconciliation

SPREAD PLAN

- Automated tool - CFHI-funded trial of MedSafer (Pis: Todd Lee and Emily McDonald)
- Patient-specific opportunities for deprescribing. Follow-up for this trial closed 06/21/17.
- CIHR-funded 10 hospital trial powered on ADE starts in August 2017.
- Adaptation of MedSafer to other settings
  - Palliative care
  - Long-term care
  - Family Health Teams

PARTNERS

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