MTM Innovations that Leverage Emerging Technologies to Enhance Interventions, Maximize Patient Outcomes and Improve Overall Pharmacy Safety

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Agenda

First Half

• About Tabula Rasa HealthCare

• The Challenge of Medication Safety and ADEs
  • Compounded by Part D

• The TRHC Solution: The Personalized Medication Risk Mitigation™ “Hub-and-Spoke” Approach to MTM CMRs

Second Half

• About EmblemHealth

• TRHC’s Enhanced MTM (or, MTM+) Powered by MedWise Advisor® (in Practice at EmblemHealth)
About Tabula Rasa HealthCare

- Tabula Rasa – “Blank Slate”

- Tabula Rasa HealthCare (TRHC), a National Healthcare Technology Company, Provides “New Beginnings” Through Innovative Service Models and Fresh Approaches to Healthcare and Pharmacy Safety

- Providing Patient-Specific, Data-Driven Technology and Solutions to Enable Healthcare Organizations Optimize Medication Regimens.
The Challenge – Adverse Drug Events

**Outpatient**
- Account for \(~3.5\) Million Physician Visits
- Contribute to About \(1\) Million Emergency Room Visits
- Result in Approximately \(280,000\) Hospital Admissions

**Inpatient**
- Affect \(~2\) Million Hospitals Stays
- Drugs are Attributed as the Most Common Cause of Inpatient Complications
- Prolong Hospital Stays by \(~2\) to \(~5\) Days
- Result in \(~$3.5\) Billion in Hospitals Costs

http://health.gov/hcq/ade.asp
The Challenge – Evolution of Part D MTM

**MMA of 2003**
- Established MTM Requirements to Ensure Part D Prescription Drugs:
  - “are appropriately used to optimize therapeutic outcomes through improved medication use and to reduce the risk of adverse events”
- Rigid Requirements
- Minimum Levels of Service

**Acumen Study (August 2013)**
- Necessary Cost of Participating in Part D
- Proactive Active Approaches Not Rewarded or Incentivized
- To Achieve the Goals of MMA, Changes are Needed
TRHC’s Science and the Vision of EmblemHealth

Change is Needed

• Anticipated Action by CMS
• Moving Beyond “Box-Checking” to Doing the Right Thing for the Patient
• EmblemHealth Proactively Took Steps in Enhance the MTM Process

Using MedWise Advisor® to Enhance the MTM

• Principles of Drug Risk
• Bringing it All Together in the MRM Matrix
• Incorporating MedWise Advisor® in the MTM Workflow
Principles of Drug Risks

Pharmacodynamics
- What a Drug Does to the Body
  - Anticholinergic Burden
  - Sedative Burden

Pharmacokinetics
- What the Body Does to a Drug
  - Competitive Inhibition
  - Renal Function

Pharmacogenomics
- How Genetic Variations Affect Drug Disposition & Response
  - Drug-Gene Interactions

Not mutually exclusive
Medication Risk Mitigation Matrix (Pat. Pending.)
MedWise Advisor®

Before Intervention

Personalized Medication Risk Mitigation Matrix

- Sedation risk
- Black box warnings
- Multi–drug risk
- Drug–gene risk
- Bio-availability
- Medication scheduling risk
- Allergy risk
- Cognitive risk
- Renal clearance risk
- Beers warnings
- Fall / injury risk
- Heart rhythm disorder risk

After Intervention

Personalized Medication Risk Mitigation Matrix

- Sedation risk
- Black box warnings
- Multi–drug risk
- Drug–gene risk
- Bio-availability
- Medication scheduling risk
- Allergy risk
- Cognitive risk
- Renal clearance risk
- Beers warnings
- Fall / injury risk
- Heart rhythm disorder risk
Enhanced CMR Workflow

MTM pharmacist assigned a member for CMR
Pharmacist reviews med list and claims
Pharmacist reviews matrix for member in Medwise

Med Recommendations communicated to doctor
Report mailed to member
Pharmacist calls member and performs verbal CMR
Enhanced MTM

Enhanced MTM (or MTM+)

- PharmD Secure Instant Messaging
- Intervention Assistance (Patient and Physician)

Risk-Stratification

CMS Enhanced MTM Model

- Announced September 28, 2015
- Regions 7, 11, 21, 25 & 28
- Applications Due January 2016
- Model
  - Regulatory Flexibility
    - Selecting Unique Populations & Interventions
  - Financial Incentives
    - Prospective Payment – PMPM to Fund Costs
    - Performance-Based Payments – Reduce Parts A & B Costs by At Least 2%, Get $2 PMPM
EmblemHealth MTM+ in Action
EmblemHealth at a Glance

- Covering New Yorkers for over 75 years
- Presently serving over 3.4 million members
- Commercial, Health Exchange, Medicaid and Medicare plans available
- National network for retirees and employees outside of New York
Methodology
2015 Quarterly Member Targeting Criteria

1. Medicare Advantage Prescription Drug Plan (MAPD) member
2. Seven or more medications for chronic conditions.
3. At least three of the five following conditions:
   - Rheumatoid arthritis
   - Chronic heart failure
   - Diabetes
   - High cholesterol
   - Chronic obstructive pulmonary disease
4. Spend $784.50 or more per quarter on chronic medications
Methodology
MTM+ Process

• Members contacted to participate in medication phone consultation with an EmblemHealth clinical pharmacist
  • Outreach via mail and telephone for all eligible member
• Pharmacists utilized multiple tools to facilitate CMR completion
  • Demographic information
  • Prescription claims data
  • MedWise Advisor® Medication Risk Mitigation Matrix
  • Drug information compendia
• Claims review done prior, during, and after CMR to identify potential issues
Methodology
MTM+ Process

• Pharmacist consultations provide full review of medication-related issues, including:
  • Health conditions
  • Allergies
  • Prescription medications
  • Over-the-counter medications
  • Vitamin supplements
  • Herbal products

• Opportunity for the member to address medication-related questions, including coverage and cost issues
Methodology
MTM+ Process

• MedWise Advisor® Medication Risk Mitigation Matrix used to identify potential medication-related issues
  • Overall drug load
  • Anticholinergic burden
  • Sedative burden
  • Beer’s list drugs
  • Drug interactions
  • Enzyme inhibition

• Pharmacists question members on potential drug-related issues and provide member/prescriber recommendations when appropriate
Methodology
MTM+ Post-CMR

- Post-CMR communication with prescriber
  - Resolve medication-related issues
  - Discuss gaps in care
  - Provide alternative therapy recommendations
  - Encourage formulary compliance

- Post-CMR communication with member
  - Communicate any therapy changes via telephone or letter
  - Mail reconciled medication list and action plan in CMS standardized format
Methodology
CMR Tracking

CMR Data Collected
• The number of CMRs completed
• CMR completion date(s)
• Reasons for non-completion
  • E.g. disenrollment, death, member request
• MedWise Advisor® use for CMR completion
  • Information provided to member and prescriber
• Medication-related issues
• Pharmacist recommendations
• Prescriber acceptance of pharmacist recommendations
## METHODOLOGY

### Member Discussions/Interventions

<table>
<thead>
<tr>
<th>Topic</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Correct drug/diagnosis</td>
<td></td>
</tr>
<tr>
<td>Correct administration &amp; dosage</td>
<td></td>
</tr>
<tr>
<td>Important drug-related information</td>
<td></td>
</tr>
<tr>
<td>Drug warnings/adverse events</td>
<td></td>
</tr>
<tr>
<td>Medication adherence</td>
<td></td>
</tr>
<tr>
<td>Drug-drug/drug-food interactions*</td>
<td></td>
</tr>
<tr>
<td>Optimal drug administration/timing*</td>
<td></td>
</tr>
<tr>
<td>Medication cost issues/savings opportunities (generics, lower-tier drugs)</td>
<td></td>
</tr>
<tr>
<td>Over-the-counter medications, vitamins, supplements, and herbal products</td>
<td></td>
</tr>
<tr>
<td>Counseling on healthcare issues (smoking, glucose/hypertension monitoring, healthy diet, etc…*)</td>
<td>*Pharmacists utilizing MedWise Advisor®</td>
</tr>
</tbody>
</table>
# METHODOLOGY

## Prescriber Interventions

<table>
<thead>
<tr>
<th>Medical necessity of all medications</th>
</tr>
</thead>
<tbody>
<tr>
<td>Medication adherence</td>
</tr>
<tr>
<td>Dose optimization</td>
</tr>
<tr>
<td>Duplicate therapy</td>
</tr>
<tr>
<td>Gaps in care</td>
</tr>
<tr>
<td>Cost savings</td>
</tr>
<tr>
<td>National guideline adherence</td>
</tr>
<tr>
<td>Adverse event prevention (eg. High risk medications in the elderly)*</td>
</tr>
<tr>
<td>Drug interactions*</td>
</tr>
</tbody>
</table>

*Pharmacists utilizing MedWise Advisor®*
Medication Review Examples
# Medication Review Example 1

**MG: 70 Year Old Female**

<table>
<thead>
<tr>
<th>Medication List</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>ALPRAZOLAM 0.25 MG TABLET</td>
<td></td>
</tr>
<tr>
<td>ATORVASTATIN 80 MG TABLET</td>
<td></td>
</tr>
<tr>
<td>BUPROPION HCL SR 150 MG TABLET</td>
<td></td>
</tr>
<tr>
<td>CICLOPIROX 0.77% GEL</td>
<td></td>
</tr>
<tr>
<td>CLOPIDOGREL 75 MG TABLET</td>
<td></td>
</tr>
<tr>
<td>COMBIVENT RESPIMAT INHAL SPRAY</td>
<td></td>
</tr>
<tr>
<td>DALIRESP 500 MCG TABLET</td>
<td></td>
</tr>
<tr>
<td>LEVOTHYROXINE 88 MCG TABLET</td>
<td></td>
</tr>
<tr>
<td>LEVOTHYROXINE 100 MCG TABLET</td>
<td></td>
</tr>
<tr>
<td>METOPROLOL TARTRATE 25 MG TAB</td>
<td></td>
</tr>
<tr>
<td>MONTELUKAST SOD 10 MG TABLET</td>
<td></td>
</tr>
<tr>
<td>SPIRONOLACTONE 25 MG TABLET</td>
<td></td>
</tr>
<tr>
<td>SYMBICORT 160-4.5 MCG INHALER</td>
<td></td>
</tr>
<tr>
<td>ASPIRIN 81 MG TABLET</td>
<td></td>
</tr>
<tr>
<td>GUAIFENESIN (MUCINEX) TABLET</td>
<td></td>
</tr>
<tr>
<td>VITAMIN D3 1000 IU TABLET</td>
<td></td>
</tr>
<tr>
<td>VITAMIN B12 1000 MCG TABLET</td>
<td></td>
</tr>
<tr>
<td>VITAMIN C 500 MG TABLET</td>
<td></td>
</tr>
<tr>
<td>FLONASE 50 MCG/ACT NASAL SPRAY</td>
<td></td>
</tr>
</tbody>
</table>
Medication Review Example 1  
MG: 70 Year Old Female  

Health conditions*  
• Anxiety, depression, high cholesterol, high blood pressure, heart failure, hypothyroidism, emphysema, allergies  

Issues identified during medication review  
• Adverse drug event(s)/drug burden: Medications with sedative properties: alprazolam, metoprolol, montelukast, spironolactone**  
• Member probed for symptoms of daytime drowsiness  
  • Member experiencing anxiety and insomnia but no drowsiness  
  • Bupropion may contribute to wakefulness  

*Obtained from member conversation and inferred from pharmacy claims  
**Drug property information obtained from Medwise Advisor®
Medication Review Example 1
MG: 70 Year Old Female

Member/prescriber recommendations
• Pharmacist recommendations for member:
  • Alprazolam, montelukast, and metoprolol to be taken at bedtime
  • Bupropion to be taken in the morning
  • Pharmacist offered to contact prescriber regarding switching to an antidepressant with sedating properties
    • Member declined and indicated she would speak with her doctor
  • No prescriber interventions provided

Outcomes
• Pending
# Medication Review Example 2

**GS: 70 Year Old Female**

<table>
<thead>
<tr>
<th>Medication List</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>AMLODIPINE BESYLATE 5 MG TAB</td>
<td>NASONEX 50 MCG NASAL SPRAY</td>
</tr>
<tr>
<td>CRESTOR 20 MG TABLET</td>
<td>ZETIA 10 MG TABLET</td>
</tr>
<tr>
<td>FUROSEMIDE 20 MG TABLET</td>
<td>CLOTRIMAZOLE-BETAMETHASONE 1%-0.05% CREAM</td>
</tr>
<tr>
<td>GLIMEPIRIDE 1 MG TABLET</td>
<td>ASPIRIN 81 MG TABLET</td>
</tr>
<tr>
<td>LEVOTHYROXINE 100 MCG TABLET</td>
<td>CRANBERRY TABLET</td>
</tr>
<tr>
<td>LISINOPRIL 20 MG TABLET</td>
<td>MULTIVITAMIN TABLET</td>
</tr>
<tr>
<td>METOPROLOL TARTRATE 25 MG TAB</td>
<td>VITAMIN D 2,000 IU TABLET</td>
</tr>
</tbody>
</table>
Medication Review Example 2
MG: 70 Year Old Female

Health conditions*
• High cholesterol, high blood pressure, heart failure, hypothyroidism, allergies

Issues identified during medication review
• Drug interaction: Member using Crestor 20 mg with Zetia 10 mg → risk of myopathy and serum transaminase elevations**
• Adverse drug event: On questioning, member indicated she has been experiencing leg pain and has recently lost 55 lbs

*Obtained from member conversation and inferred from pharmacy claims
**Drug interaction information obtained from Medwise Advisor®
Medication Review Example 2
MG: 70 Year Old Female

Member/prescriber recommendations
• Pharmacist recommendations made to prescriber:
  • Recommend re-evaluating concomitant use of Crestor and Zetia
    • Discontinue Zetia
    • Reduce Crestor dose
• Pharmacist recommendations for member:
  • Address muscle pain with prescriber at next appointment

Outcomes
• Pending
### Medication Review Example 3
#### DG: 65 Year Old Male

<table>
<thead>
<tr>
<th>Medication List</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>ALLOPURINOL 100 MG TABLET</td>
<td>FUROSEMIDE 80 MG TABLET</td>
</tr>
<tr>
<td>ASPIRIN EC 81 MG TABLET</td>
<td>GABAPENTIN 300 MG CAPSULE</td>
</tr>
<tr>
<td>ATORVASTATIN 80 MG TABLET</td>
<td>HYDRALAZINE 50 MG TABLET</td>
</tr>
<tr>
<td>CARVEDILOL 3.125 MG TABLET</td>
<td>ISOSORBIDE DN 20 MG TABLET</td>
</tr>
<tr>
<td>CICLOPIROX 0.77% GEL</td>
<td>KETOROLAC 0.4% OPHTH SOLUTION</td>
</tr>
<tr>
<td>CLOPIDOGREL 75 MG TABLET</td>
<td>LEVOTHYROXINE 25 MCG TABLET</td>
</tr>
<tr>
<td>DIGITEK 125 MCG TABLET</td>
<td>NOVOLOG 100 UNITS/ML FLEXPEN</td>
</tr>
<tr>
<td>DORZOLAMIDE-TIMOLOL EYE DROPS</td>
<td>OMEPRAZOLE 40 MG CAPSULE</td>
</tr>
<tr>
<td>ELIQUIS 2.5 MG TABLET</td>
<td>VITAMIN D2 1.25 MG TABLET</td>
</tr>
<tr>
<td>ENALAPRIL MALEATE 20 MG TAB</td>
<td>LANTUS 100 UNIT/ML SOLUTION</td>
</tr>
</tbody>
</table>
Medication Review Example 3
DG: 65 Year Old Male

Health conditions*
• Gout, high cholesterol, high blood pressure, heart failure, post-myocardial infarction, hypothyroidism, neuropathy, diabetes, glaucoma, GERD, sleep apnea, shortness of breath

Issues identified during medication review
• Duplicate therapy: Member using Eliquis, clopidogrel, and aspirin together → potential for increased bleeding risk
• Drug interaction: Concomitant use of clopidogrel with omeprazole → reduced efficacy of clopidogrel**
• Gap in care: Member indicated frequent symptoms of shortness of breath, but no rescue inhaler prescribed

*Obtained from member conversation and inferred from pharmacy claims
**Drug interaction information obtained from Medwise Advisor®
Medication Review Example 3
DG: 65 Year Old Male

Member/prescriber recommendations

- Pharmacist recommendations made to prescriber:
  - Discuss concomitant use of Eliquis, clopidogrel, and aspirin, confirm whether all 3 are indicated
  - Switch from omeprazole to alternative such as pantoprazole, lansoprazole, or rabeprazole
  - Addition of rescue inhaler such as Proair or Ventolin

- Pharmacist recommendations for member:
  - Discuss need for a rescue inhaler with prescriber at next appointment
Medication Review Example 3
DG: 65 Year Old Male

Outcomes
- Prescriber confirmed that member should continue on Eliquis, clopidogrel, and aspirin
- Member switched from omeprazole to pantoprazole
- Addition of rescue inhaler - pending
Medication Review Example 4
CA: 66 Year Old Female

<table>
<thead>
<tr>
<th>Medication List</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>ATORVASTATIN 80 MG TABLET</td>
<td>ZETIA 10 MG TABLET</td>
</tr>
<tr>
<td>BENICAR 40 MG TABLET</td>
<td>JANUMET 500/50 MG TABLET</td>
</tr>
<tr>
<td>DUEXIS 800-26.6 MG TABLET</td>
<td>INVOKANA 100 MG TABLET</td>
</tr>
<tr>
<td>JANUVIA 100 MG TABLET</td>
<td>SYNTHROID 175 MCG TABLET</td>
</tr>
<tr>
<td>NASONEX 50 MCG NASAL SPRAY</td>
<td>ASPIRIN 81 MG TABLET</td>
</tr>
<tr>
<td>PROAIR HFA 90 MCG INHALER</td>
<td>CENTRUM SILVER MUTIVITAMIN TABLET</td>
</tr>
<tr>
<td>SPIRIVA RESPIMAT INHAL SPRAY</td>
<td>VITAMIN C 500 MG TABLET</td>
</tr>
<tr>
<td>WELCHOL 625 MG TABLET</td>
<td>VITAMIN D 1000 UNITS TABLET</td>
</tr>
</tbody>
</table>
Medication Review Example 4
CA: 66 Year Old Female

Health conditions*
• High cholesterol, high blood pressure, diabetes, COPD, hypothyroidism, allergies

Issues identified during medication review
• Duplicate therapy: concomitant use of Januvia and Janumet
• Duplicate therapy/drug burden: concomitant use of Welchol, Zetia, and atorvastatin

*Obtained from member conversation and inferred from pharmacy claims
Medication Review Example 4
CA: 66 Year Old Female

Member/prescriber recommendations
• Pharmacist recommendations made to prescriber:
  • Recommend discontinuation of Januvia or Janumet
  • Recommend to re-evaluate concomitant use of Welchol, Zetia, and atorvastatin
    • Discontinue Zetia and/or Welchol
• Pharmacist recommendations for member:
  • Make an appointment with primary care prescriber and discuss blood glucose and cholesterol levels

Outcomes
• Prescriber indicated that Janumet and Welchol should be discontinued
Medication Review Example 5
BP: 82 Year Old Female

<table>
<thead>
<tr>
<th>Medication List</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>DIGOXIN 125 MCG TABLET</td>
<td>LEVOTHYROXINE 75 MCG TABLET</td>
</tr>
<tr>
<td>DILTIAZEM ER 120 MG CAPSULE</td>
<td>SIMVASTATIN 20 MG TABLET</td>
</tr>
<tr>
<td>DONEPEZIL HCL 5 MG TABLET</td>
<td>WARFARIN SODIUM 1 MG TABLET</td>
</tr>
<tr>
<td>HUMALOG MIX 75-25 VIAL</td>
<td>ORENCIA INFUSION MONTHLY</td>
</tr>
<tr>
<td>HYDROCHLOROTHIAZIDE 12.5 MG CP</td>
<td></td>
</tr>
</tbody>
</table>
Medication Review Example 5
BP: 82 Year Old Female

Health conditions*
• High cholesterol, high blood pressure, diabetes, rheumatoid arthritis, hypothyroidism, heart failure, dementia

Issues identified during medication review
• Drug interaction: Concomitant use of simvastatin 20 mg with diltiazem 120 mg → elevated plasma levels of simvastatin, increasing the risk of toxicity (eg, rhabdomyolysis, myositis)**

*Obtained from member conversation and inferred from pharmacy claims
**Drug interaction information obtained from Medwise Advisor®
Medication Review Example 5
BP: 82 Year Old Female

Member/prescriber recommendations
- Pharmacist recommendations made to prescriber:
  - Recommend switch from simvastatin to atorvastatin or pravastatin
- Pharmacist recommendations for member:
  - Make an appointment with primary care prescriber and review medications, blood pressure, and cholesterol levels

Outcomes
- Pending
THANK YOU.

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