PharmaSuitables
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Disclosures

• Steve, Richard and Zach work for Rocky Mountain Health Plans.
• We do not have any financial interest in the medications we are discussing today.
• We have no intention to malign any person, business or product.
Question 1

• Abuse deterrent opioids...
  – A) have been shown to reduce accidental opioid deaths by approximately 20% in US based studies
  – B) Have been shown to reduce opioid abuse in U.S. cities, but only via the nasal and intravenous routes
  – C) Have not been shown to reduce opioid abuse
Question 2

• Which statement is correct?
  – A) Basaglar is a biosimilar insulin, bioequivalent to Lantus
  – B) Basaglar is not a biosimilar, but is a bioequivalent generic to Lantus
  – C) Basaglar can be substituted for Lantus at a pharmacy as long as the Rx doesn’t say “dispense as written”
  – D) Basaglar is about 17% less expensive than Lantus
Question 3

Xyzal contains the R enantiomer of what other second generation antihistamine?

A. Claritin (loratadine)
B. Allegra (fexofenadine)
C. Zyrtec (cetirizine)
D. Benadryl (diphenhydramine)
Question 4

Soliqua and Xultophy are the new combination products containing which two types of antidiabetic drugs?

A. Biguanide/DPP-4 inhibitor
B. Basal insulin/GLP-1 agonist
C. GLP-1 agonist/DPP-4 inhibitor
D. SGLT-2/sulfonylurea
Question 5

When was the last topical drug for mild to moderate atopic dermatitis approved by the FDA prior to this year?

A. 2002
B. 1938
C. 1995
D. 2005
Currently available ADO’s

• **Xtampza (oxycodone ER base)**
  – Category: Physical/chemical barrier, capsules
    • 27mg (equiv to oxycodone 30mg) $10.50 ea
      – $450-$750/mo
    • Max dose 288mg/day due to wax content

• **Oxycontin (oxycodone ER)**
  – Category: Physical/chemical barrier, tablets
    • $450-$1250/mo

• **Embeda (morphine/naloxone)**
  – Category: physical/chemical barrier, capsules
    – $450 - $850/mo
Currently available ADO’s

• Zohydro ER (hydrocodone ER)
  – Category: physical/chemical barrier, capsules
  – $400 - $800/mo

• Hysingla ER (hydrocodone ER)
  – Category: physical/chemical barrier, tablets

<table>
<thead>
<tr>
<th>Status Label Name</th>
<th>AWP ea</th>
</tr>
</thead>
<tbody>
<tr>
<td>HYSINGLA ER TAB 100 MG</td>
<td>44.1577</td>
</tr>
<tr>
<td>HYSINGLA ER TAB 120 MG</td>
<td>48.9347</td>
</tr>
<tr>
<td>HYSINGLA ER TAB 20 MG</td>
<td>9.4532</td>
</tr>
<tr>
<td>HYSINGLA ER TAB 30 MG</td>
<td>13.7983</td>
</tr>
<tr>
<td>HYSINGLA ER TAB 40 MG</td>
<td>18.5897</td>
</tr>
<tr>
<td>HYSINGLA ER TAB 60 MG</td>
<td>25.7407</td>
</tr>
<tr>
<td>HYSINGLA ER TAB 80 MG</td>
<td>34.7043</td>
</tr>
</tbody>
</table>
Currently available ADO’s

- Arymo ER (morphine sulfate ER)
  - Category: physical/chemical barrier, tablets
- Oxaydo (oxycodone IR)
  - Category: aversion
Arymo ER (morphine sulfate ER)

• Another abuse deterrent opioid, hit the market in early 2017
• Physical/chemical barrier category
• Uses proprietary “Guardian Technology”
  – Polymer matrix utilizing injection molding
  – Makes for a hard, controlled release tablet that turns into a viscous hydrogel if crushed and mixed with liquid
Arymo ER (morphine sulfate ER)

• Clinical study
  – 39 subjects, “non-dependent recreational opioid users”
  – Arymo 60mg crushed in juice, vs. intact, vs. morphine sulfate powder in juice, vs. placebo
  – “Drug liking” score: Arymo had statistically lower “liking” score than morphine sulfate
  – “Would take again” score: no difference
  – Investigator’s interpretation: the difference in drug liking scores were not likely clinically significant

• No nasal abuse studies were performed

• Cost: $10.38 per 30mg tab, $20.76 per 60mg tab
  – Generic morphine sulfate ER is $0.73 cents for 30mg, $1.27 for 60mg
Oxaydo IR (oxycodone IR)

- The only immediate release abuse deterrent opioid on the market
- Make by the makers of Arymo.
  - Previous names were Oxecta and Acurox over past 4 years
- In the “aversion” category
  - Includes a substance that burns the nose and throat if crushed and snorted
- In a study (n=40), 5% of subjects said they wouldn’t snort crushed oxycodone IR again, and 30% said they wouldn’t snort Oxaydo again
The clinical significance of the difference in drug liking and difference in response to taking the drug again reported in this study has not yet been established. There is no evidence that OXAYDO® has reduced abuse liability compared to immediate-release oxycodone.
On the horizon
• Basal insulin glargine
  – Marketed by Eli Lilly & Co
  – FDA approved December, 2016
  – Only available in a per-filled KwikPen device (no vials)
  – 100u/mL
  – Considered a “follow on biologic (FOB)” to Lantus
    • Is not a biosimilar or a generic, although this is more regulatory semantics than anything else
  – Cannot be substituted for Lantus at the pharmacy
Basaglar (insulin glargine)

- Basal insulin glargine
  - The regulatory pathway
    - **Small molecule** drugs are approved via the FDA’s New Drug Application (NDA) pathway, filed under section 505(b)(2) of the FD&C Act. This gives a drug an **NDA**.
    - Most **biologic drugs** are approved under Section 351 of the Public Health Services Act. This means a drug is approved via the Biologics License Application, or **BLA**, rather than the NDA.
Basaglar (insulin glargine)

- **Basal insulin glargine**
  - The regulatory pathway
  - **Biosimilars** are approved via the 351(k) regulatory pathway, an abbreviated pathway requiring fewer clinical studies than a brand name product. This can only be used if the reference drug was approved via a **BLA**.
  - The U.S.’s first biosimilar, Zarxio (filgrastim-sndz) was approved via the 351(k) pathway, because **Neupogen** had a **BLA** (not NDA).
Basaglar (insulin glargine)

• **Basal insulin glargine**
  – The regulatory pathway
    • If the reference drug was approved via an NDA, (the 505(b)(2) pathway), then it cannot have a biosimilar. A “follow on drug” could be marketed, but it would have to be approved via the 505(b)(2) pathway and receive a New Drug Application (NDA).
      – This is the case with Basaglar, the “follow on” to Lantus
      – Because Lantus was approved via an NDA, not BLA
    • FOB’s and biosimilars are **not bioequivalent** to the listed drug relied upon for approval, so cannot be substituted at pharmacies
Basaglar (insulin glargine)

- **Basal insulin glargine**
  - Basaglar was approved relying, in part, on the safety and efficacy of Lantus
  - Non-inferiority was established vs. Lantus in both Type 1 and Type 2 diabetes
  - Cost is about 17% less than Lantus ($380/five 3mL syringes vs. $447)
IT’S A BEGINNER INSULIN

BASAGLAR is a long-acting, basal insulin, which is a good place to begin for people who are new to insulin. It gives you a base amount of insulin to supplement the insulin your body produces naturally.
WHAT SHOULD I KNOW IF I’M CHANGING FROM LANTUS TO BASAGLAR?

- BASAGLAR is designed to be similar to Lantus® (insulin glargine injection)
- In a 24-week study, BASAGLAR worked as well as Lantus (approved in the US and outside the US) at lowering blood sugar
- Like Lantus, you only take BASAGLAR once daily, **at the same time every day**
- BASAGLAR and Lantus both come in prefilled Pens
- Dosing should be the same when changing from Lantus to BASAGLAR, but check with your healthcare provider to be sure
Soliqua and Xultophy

- **Insulin Degludec/Liraglutide** (100/3.6 units-mcg/mL)
  - Victoza + Tresiba

- **Insulin Glargine/lixisenatide** (100/33 units-mcg/mL)
  - Lantus + Adlyxin
• Approved the same day 11/21/2016
• Both indicated for patients with T2DM who have been inadequately controlled basal insulin (less than max dosing) or GLP-1 agonist (included in formulation)
• Both 2-in-1 once daily injections
• Both lowered A1c about 0.5% when compared to Lantus

Table 5: Results of a 30-Week Study in Patients with Type 2 Diabetes Mellitus Inadequately Controlled on Basal Insulin

<table>
<thead>
<tr>
<th>Number of Subjects (randomized and treated)</th>
<th>Insulin Glargine 100 units/mL</th>
</tr>
</thead>
<tbody>
<tr>
<td>365</td>
<td>365</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>HbA1c (%)</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Baseline (mean; post run-in phase)</td>
<td>8.1</td>
</tr>
<tr>
<td>End of study (mean)</td>
<td>6.9</td>
</tr>
<tr>
<td>LS change from baseline (mean)</td>
<td>-1.1</td>
</tr>
<tr>
<td>Difference vs insulin glargine [95% confidence interval]</td>
<td>(-0.5 [-0.6, -0.4])</td>
</tr>
</tbody>
</table>

| Patients [%] reaching HbA1c <7% at week 30 | 201 (55.1%) | 108 (29.6%) |

<table>
<thead>
<tr>
<th>Fasting Plasma Glucose (mg/dL)</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Baseline (mean)</td>
<td>132.3</td>
</tr>
<tr>
<td>End of study (mean)</td>
<td>121.9</td>
</tr>
<tr>
<td>LS change from baseline (mean)</td>
<td>-5.7</td>
</tr>
</tbody>
</table>

Table 7: Results of a 26-Week Trial in Patients with Type 2 Diabetes Mellitus Inadequately Controlled on Insulin Glargine U-100 (Study C)

| Total (N) | 278 | 279 |

<table>
<thead>
<tr>
<th>HbA1c (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Baseline</td>
</tr>
<tr>
<td>8.1</td>
</tr>
<tr>
<td>End of trial (LS Mean)</td>
</tr>
<tr>
<td>6.6</td>
</tr>
<tr>
<td>Change from baseline (LS Mean)</td>
</tr>
<tr>
<td>-1.57</td>
</tr>
<tr>
<td>Estimated treatment difference [95% CI]</td>
</tr>
<tr>
<td>-0.51 [-0.67, -0.34]</td>
</tr>
<tr>
<td>Percentage of patients achieving HbA1c &lt;7%</td>
</tr>
<tr>
<td>FPG (mg/dL)</td>
</tr>
<tr>
<td>Baseline</td>
</tr>
<tr>
<td>161</td>
</tr>
<tr>
<td>End of trial (LS Mean)</td>
</tr>
<tr>
<td>110</td>
</tr>
<tr>
<td>Change from baseline (LS Mean)</td>
</tr>
<tr>
<td>-49.9</td>
</tr>
</tbody>
</table>

Mirror Image?
Weigh in

• Xultophy
  – Cost
    • $1144
  – Manufacturer
    • Novo Nordisk
  – Storage
    • Unused – Store in fridge
    • Used – Discard after 21 days outside fridge
  – Availability
    • 03/2017

• Soliqua
  – Cost
    • $762
  – Manufacturer
    • Sanofi
  – Storage
    • Unused – Store in fridge
    • Used – Discard after 14 days outside fridge
  – Availability
    • 12/2016
Tale of the Tape

• Xultophy
  - Max dosing is 50 unit of Tresiba
  - Victoza has cardiovascular and reduction in kidney disease data per LEADER study
  - DUAL V trial shows patients were up to 4.5 times more likely to achieve glycemic targets with less hypoglycemia or weight gain compared to Lantus

• Soliqua
  - Max dosing is 60 units of Lantus
  - Lantus is the #1 prescribed stand alone long-acting insulin
  - Lixisenatide provides no CV benefit/harm per ELIXA study
  - Showed that no difference in hypoglycemic events compared to Lantus
ADA Treatment Algorithm

Healthy eating, weight control, increased physical activity, and diabetes education

Metformin
- high
- low risk
- neutral / loss
- GI / lactic acidosis
- low

If A1C target not achieved after ~3 months of monotherapy, proceed to 2-drug combination (order not meant to denote any specific preference—choice dependent on a variety of patient- and disease-specific factors):

- Metformin + Sulfonylurea
  - high
  - moderate risk
  - gain
  - hypoglycemia
  - low

- Metformin + Thiazolidinedione
  - high
  - low risk
  - gain
  - edema, HF, fxs
  - low

- Metformin + DPP-4 Inhibitor
  - high
  - intermediate
  - loss
  - low risk
  - GI, dehydration
  - high

- Metformin + SGLT2 Inhibitor
  - high
  - low risk
  - loss
  - GI
  - high

- Metformin + GLP-1 Receptor Agonist
  - high
  - high risk
  - gain
  - hypoglycemia
  - variable

If A1C target not achieved after ~3 months of dual therapy, proceed to 3-drug combination (order not meant to denote any specific preference—choice dependent on a variety of patient- and disease-specific factors):

- Metformin + Sulfonylurea + TZD
- Metformin + Thiazolidinedione + DPP-4-I
- Metformin + DPP-4 Inhibitor + SGLT2-I
- Metformin + SGLT2 Inhibitor + Insulin
- Metformin + GLP-1 Receptor Agonist + Insulin

If A1C target not achieved after ~3 months of triple therapy and patient (1) on oral combination, move to injectables; (2) on GLP-1 RA, add basal insulin; or (3) on optimally titrated basal insulin, add GLP-1 RA or mealtime insulin. In refractory patients consider adding TZD or SGLT2-I:
By the Numbers

Differences between LEADER, EMPA-REG and ELIXA

<table>
<thead>
<tr>
<th>Parameter</th>
<th>LEADER</th>
<th>EMPA-REG</th>
<th>ELIXA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Study drug</td>
<td>Liraglutide</td>
<td>Empagliflozin</td>
<td>Lixisenatide</td>
</tr>
<tr>
<td>No. of patients randomized</td>
<td>9340</td>
<td>7028</td>
<td>6068</td>
</tr>
<tr>
<td>Patients completed the study (%)</td>
<td>97</td>
<td>97</td>
<td>96.3</td>
</tr>
<tr>
<td>Baseline HbA1C (%)</td>
<td>8.7</td>
<td>8.07</td>
<td>7.7</td>
</tr>
<tr>
<td>Baseline BMI (Kg/m^2)</td>
<td>32.5</td>
<td>30.6</td>
<td>30.1</td>
</tr>
<tr>
<td>Median duration of treatment (years)</td>
<td>3.52</td>
<td>2.6</td>
<td>1.89</td>
</tr>
<tr>
<td>Median observation time (years)</td>
<td>3.84</td>
<td>3.1</td>
<td>2.1</td>
</tr>
<tr>
<td>Primary outcome—MACE reduction</td>
<td>13%</td>
<td>14%</td>
<td>2% increase (P not significant)</td>
</tr>
<tr>
<td>CV death reduction</td>
<td>22%</td>
<td>38%</td>
<td>NA</td>
</tr>
<tr>
<td>Non-fatal MI reduction</td>
<td>12%</td>
<td>13%</td>
<td>NA</td>
</tr>
<tr>
<td>Non-fatal stroke</td>
<td>11% reduction</td>
<td>24% increase</td>
<td>NA</td>
</tr>
<tr>
<td>Death from any cause reduction</td>
<td>15%</td>
<td>32%</td>
<td>6%</td>
</tr>
<tr>
<td>Weight reduction at the end of the study</td>
<td>2.3 kg</td>
<td>1.4 kg</td>
<td>0.7 kg</td>
</tr>
<tr>
<td>Time to benefit</td>
<td>12–18 months</td>
<td>4–8 weeks</td>
<td>Non-inferiority to placebo established No observed benefits</td>
</tr>
<tr>
<td>CV benefit</td>
<td>Linked to modification in progression of atherosclerotic vascular disease</td>
<td>Closely linked to hemodynamic changes</td>
<td>No observed benefits</td>
</tr>
<tr>
<td>NNT to prevent one coronary event over ~3 years</td>
<td>66</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>NNT to prevent one death over ~3 years</td>
<td>98</td>
<td>N/A</td>
<td>N/A</td>
</tr>
</tbody>
</table>

CV cardiovascular, NNT number needed to treat

Jardiance – Should be in water?

• Several versions
  – Jardiance (empagliflozin) tablets (10mg/25mg)
    • Once a day dosing
  – Synjardy tablets (empagliflozin/metformin)
    (5/500, 5/1000, 12.5/500, 12.5/1000)
    • BID dosing
  – Synjardy XR tablets (empagliflozin/metformin)
    (5/1000, 10/1000, 12.5/1000, 25/1000)
    • Once a day dosing
# EMPA-REG Results

Table 11  
Treatment Effect for the Primary Composite Endpoint, and its Components

<table>
<thead>
<tr>
<th>Event</th>
<th>Placebo N=2333</th>
<th>Empagliflozin N=4687</th>
<th>Hazard ratio vs placebo (95% CI)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Composite of cardiovascular death, non-fatal myocardial infarction, non-fatal stroke (time to first occurrence)</td>
<td>282 (12.1%)</td>
<td>490 (10.5%)</td>
<td>0.86 (0.74, 0.99)</td>
</tr>
<tr>
<td>Non-fatal myocardial infarction*</td>
<td>121 (5.2%)</td>
<td>213 (4.5%)</td>
<td>0.87 (0.70, 1.09)</td>
</tr>
<tr>
<td>Non-fatal stroke*</td>
<td>60 (2.6%)</td>
<td>150 (3.2%)</td>
<td>1.24 (0.92, 1.67)</td>
</tr>
<tr>
<td>Cardiovascular death*</td>
<td>137 (5.9%)</td>
<td>172 (3.7%)</td>
<td>0.62 (0.49, 0.77)</td>
</tr>
</tbody>
</table>

*Treated set (patients who had received at least one dose of study drug)

\( p \)-value for superiority (2-sided) 0.04

*Total number of events

Figure 5  
Estimated Cumulative Incidence of Cardiovascular Death

NNT = 63 over 3 years
NNT = 45 over 3 years
Outcome of Study

• New indication
  – To reduce the risk of cardiovascular death in adult patients with type 2 diabetes mellitus and established cardiovascular disease

• Several questions remain:
  – What is the mechanism to this CV benefit?
  – Is this a class effect?
  – Should empagliflozin be second or even first line therapy with this new information?
    • Metformin: NNT = 15 over 10 years (decrease mortality)
Eucrisa and Rhofade

The price will make you red in the face
Eucrisa (crisaborole)

- Atopic dermatitis (mild to moderate)
- First new topical treatment since 2002 for this indication
- An option for the face to decrease chronic topical steroid use

- Cost (AWP): $696/60 gm tube
FIGURE 1. cAMP-activated intracellular signaling in normal healthy skin (A), untreated atopic dermatitis (B), and atopic dermatitis treated with the PDE4 inhibitor crisaborole (C). AMP, adenosine monophosphate; cAMP, cyclic adenosine monophosphate; PDE4, phosphodiesterase 4.
Rhofade (oxymetazoline)

• Afrin in cream form
• Indication
  – Persistent erythema of face associated with rosacea
• Takes the red out only

• Cost (AWP): $570/30 gm tube
# Other options

**Drug Therapies for Rosacea**

<table>
<thead>
<tr>
<th>Drug</th>
<th>Dosage Form</th>
<th>FDA Indication for Rosacea</th>
<th>Adverse Event</th>
</tr>
</thead>
<tbody>
<tr>
<td>oral doxycycline (Oracea)</td>
<td>oral capsule</td>
<td>only inflammatory lesions (papules and pustules) of rosacea</td>
<td>nasopharyngitis, sinusitis, diarrhea, hypertension</td>
</tr>
<tr>
<td>azelaic acid (Finacea)</td>
<td>gel</td>
<td>inflammatory papules and pustules of mild to moderate rosacea</td>
<td>Stinging, irritation, burning</td>
</tr>
<tr>
<td>brimonidine (Mirvaso)</td>
<td>gel</td>
<td>persistent (non-transient) erythema of rosacea</td>
<td>Pruritus, burning, irritation, dryness, erythema</td>
</tr>
<tr>
<td>ivermectin (Soolantra)</td>
<td>cream</td>
<td>inflammatory lesions of rosacea</td>
<td>Burning, skin irritation</td>
</tr>
<tr>
<td>oxymetazoline (Rhofade)</td>
<td>cream</td>
<td>persistent facial erythema associated with rosacea</td>
<td>Irritation, burning, worsening inflammatory lesions of rosacea</td>
</tr>
</tbody>
</table>

No Rebound!

**Oxymetazoline 1% Safety Profile Demonstrates No Rebound Effect**

<table>
<thead>
<tr>
<th>Oxymetazoline: AEs by &gt;2% of Patients</th>
<th>Mirvaso: AEs by &gt;4% of Patients</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Adverse Event (Preferred Term)</strong></td>
<td><strong>Preferred Term</strong></td>
</tr>
<tr>
<td>Upper respiratory tract infection</td>
<td>Flushing</td>
</tr>
<tr>
<td>Rosacea</td>
<td>Erythema</td>
</tr>
<tr>
<td>Application site dermatitis</td>
<td>Rosacea</td>
</tr>
<tr>
<td>Nasopharyngitis</td>
<td>Nasopharyngitis</td>
</tr>
<tr>
<td>Hypertension</td>
<td>Skin burning sensation</td>
</tr>
<tr>
<td>Sinusitis</td>
<td>Increased intraocular pressure</td>
</tr>
<tr>
<td>Headache</td>
<td>Headache</td>
</tr>
<tr>
<td>Application site pain</td>
<td></td>
</tr>
<tr>
<td>Application site pruritus</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Oxy 1.0%(N=440)</th>
<th>Mirvaso (N=449)</th>
</tr>
</thead>
<tbody>
<tr>
<td>3.6%</td>
<td>10%</td>
</tr>
<tr>
<td>3.2%</td>
<td>8%</td>
</tr>
<tr>
<td>3.0%</td>
<td>5%</td>
</tr>
<tr>
<td>3.0%</td>
<td>5%</td>
</tr>
<tr>
<td>2.5%</td>
<td>4%</td>
</tr>
<tr>
<td>2.3%</td>
<td>4%</td>
</tr>
<tr>
<td>2.3%</td>
<td>4%</td>
</tr>
<tr>
<td>2.0%</td>
<td></td>
</tr>
<tr>
<td>2.0%</td>
<td></td>
</tr>
</tbody>
</table>

Recreated from Mirvaso Label. Data presented for >4% of Patients only.

**Much higher rates of discontinuations for Mirvaso (1-year long-term safety study for both)**

<table>
<thead>
<tr>
<th>Patient Disposition (1-year safety)</th>
<th>Oxymetazoline</th>
<th>Mirvaso</th>
</tr>
</thead>
<tbody>
<tr>
<td>Premature discontinuation</td>
<td>17.0%</td>
<td>37.9%</td>
</tr>
<tr>
<td>Due to AEs</td>
<td>3.2%</td>
<td>16.7%</td>
</tr>
</tbody>
</table>

Large discontinuation?
Xyzal (levocetirizine) – It’s a hoot

Another prescription antihistamine goes over the counter
PI housekeeping

• Indications
  – Season/perennial allergic rhinitis
  – Uncomplicated skin manifestations of chronic idiopathic urticaria

• Formulations
  – 5mg tablets and 0.5mg/mL solution

• Indicated for use down to 6 months of age as a prescription.
  – Two years and older as OTC
    • 1.25mg PO every evening
  – Six years and older
    • 5mg tablet
Clinical Value?

• Another antihistamine OTC to increase competition but.....from the same company that makes Allegra (fexofenadine)
• Xyzal is the levo (R) enantiomer of Zyrtec
• Studies show that there is no statistical significant difference between Xyzal and Zyrtec for:
  – Efficacy
  – Rhinitis symptoms
  – Sedation
  – Somnolence
Generic Drugs=Be Careful
Metformin ER

• It’s just metformin
• Why am I getting a denial?
Glumetza

• Valeant pharmaceuticals
• 2015
• Purchased Salix, maker of Glumetza
• Increased price over 1000%
• Excluded on many formularies due to price increase
  – Express scripts
Valeant hits back

- Exclusive preferred pharmacy
  - Walgreens
- Scripts are shifted to preferred manufacturers regardless of cost
- Deal signed
  - “Shares of Valeant surged 12% to $105.76”
Glumetza

• **Glumetza (metformin ER) 1000 mg # 60**
  – **Generic**
    • Walgreens - $2317
    • Walmart - $1811
    • Target (CVS) - $5056 (with free coupon!)
  – **Brand**
    • Walgreens - $7143
    • Walmart - $6899

Prices based on GoodRX.com
## Prices and coupons for 60 tablets of Glumetza 1000mg

<table>
<thead>
<tr>
<th>Store</th>
<th>Price</th>
<th>Note</th>
</tr>
</thead>
<tbody>
<tr>
<td>City Market</td>
<td>$6,822.15</td>
<td>with free coupon</td>
</tr>
<tr>
<td>Target (CVS)</td>
<td>$6,841.79</td>
<td>with free coupon</td>
</tr>
<tr>
<td>Walmart</td>
<td>$6,899.88</td>
<td>with free discount</td>
</tr>
<tr>
<td>Safeway</td>
<td>$6,902.80</td>
<td>with free coupon</td>
</tr>
</tbody>
</table>

### Savings Tip

**Generic Alternative Available**

A generic version of this drug is available.
# Prices and coupons for 60 tablets of metformin ER (Glumetza) 1000mg

<table>
<thead>
<tr>
<th>Store</th>
<th>Price</th>
<th>Discount Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>Walmart</td>
<td>$1,811.36</td>
<td>with free discount</td>
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<tr>
<td>Walgreens</td>
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<tr>
<td>Rite-Aid</td>
<td>$2,892.85</td>
<td>with free coupon</td>
</tr>
<tr>
<td>Target (CVS)</td>
<td>$5,056.87</td>
<td>with free coupon</td>
</tr>
</tbody>
</table>

Lowest prices near Grand Junction, CO
Glumetza Metformin ER (Glumetza)

Metformin ER (Fortamet) is an expensive drug used to treat type II diabetes. It helps control blood sugar in combination with diet and exercise. This drug is slightly less popular than comparable drugs. It is available in brand and generic versions. It is covered by some Medicare and insurance plans, but pharmacy coupons or cash prices may be lower. Compare biguanides.
Fortamet

• Fortamet (metformin ER) 1000mg # 60
  – Generic
    • Walgreens - $337
    • Walmart - $479
  – Brand
    • Walgreens - $2135
    • Walmart - $2063
Glucophage

• Glucophage XR (metformin ER)
  – 750mg #90 (generic metformin ER)
    • Walgreens - $43
    • Walmart - $28

• Glucophage IR (metformin IR)
  – 1000mg # 60 (generic metformin IR)
    • Walgreens - $5
    • Walmart - $4
FirstDatabank AWP Pricing

<table>
<thead>
<tr>
<th>NDC</th>
<th>Status</th>
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<th>AWP ea</th>
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<tr>
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<td>GLUMETZA TAB 1000MG</td>
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<tr>
<td>68012000213</td>
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<td>GLUMETZA TAB 500MG</td>
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<table>
<thead>
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### First Databank AWP Pricing

<table>
<thead>
<tr>
<th>Label Name</th>
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<th>Units</th>
<th>Source</th>
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<tbody>
<tr>
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<td>120.2231</td>
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<td>A3</td>
<td>Metformin HCl Tab SR 24HR Modified Release 1000 MG</td>
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<td>A3</td>
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<tr>
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<td>100</td>
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<td>Generic</td>
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<td>METFORMIN ER TAB 1000MG</td>
<td>31.4000</td>
<td>60</td>
<td>EA</td>
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<tr>
<td>METFORMIN ER TAB 1000MG</td>
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<td>Generic</td>
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<td>METFORMIN ER TAB 1000MG</td>
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<td>METFORMIN ER TAB 1000MG</td>
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# FirstDatabank AWP Pricing

<table>
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<th>Status Label</th>
<th>Name</th>
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<th>Units</th>
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<td>A</td>
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<td>EA</td>
<td>Generic</td>
<td>AB</td>
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## Diabetes

<table>
<thead>
<tr>
<th>Generic name</th>
<th>Reference Brand</th>
<th>Strength</th>
<th>Form</th>
<th>Cost</th>
<th>Cost/mo</th>
</tr>
</thead>
<tbody>
<tr>
<td>metformin</td>
<td>Glumetza</td>
<td>1000 MG</td>
<td>TABLET ER</td>
<td>$99.50</td>
<td>$5,970</td>
</tr>
<tr>
<td>metformin</td>
<td>Glumetza</td>
<td>500 MG</td>
<td>TABLET ER</td>
<td>$48.14</td>
<td>$5,777</td>
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<tr>
<td>metformin</td>
<td>Fortamet</td>
<td>1000 MG</td>
<td>TAB Osmotic 24 HR</td>
<td>$12.83</td>
<td>$770</td>
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<tr>
<td>metformin HCl</td>
<td>Glucophage XR</td>
<td>750 MG</td>
<td>TAB, EXT REL 24 HR</td>
<td>$0.18</td>
<td>$16</td>
</tr>
<tr>
<td><em>metformin HCl</em></td>
<td><em>Glucophage XR</em></td>
<td>500 MG</td>
<td>TAB, EXT REL 24 HR</td>
<td>$0.10</td>
<td>$12</td>
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<tr>
<td><em>metformin HCl</em></td>
<td><em>Glucophage</em></td>
<td>850 MG</td>
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<td>$0.07</td>
<td>$6</td>
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<tr>
<td><em>metformin HCl</em></td>
<td><em>Glucophage</em></td>
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<td>$0.06</td>
<td>$4</td>
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<tr>
<td><em>metformin HCl</em></td>
<td><em>Glucophage</em></td>
<td>500 MG</td>
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<td>$0.04</td>
<td>$5</td>
</tr>
<tr>
<td>pioglitazone HCl/glimepiride</td>
<td>Duetact</td>
<td>30 MG-4 MG</td>
<td>TABLET</td>
<td>$23.75</td>
<td>$713</td>
</tr>
<tr>
<td><em>pioglitazone HCl</em></td>
<td><em>Actos</em></td>
<td>30 MG</td>
<td>TABLET</td>
<td>$0.22</td>
<td>$7</td>
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<tr>
<td><em>glimepiride</em></td>
<td><em>Amaryl</em></td>
<td>4 MG</td>
<td>TABLET</td>
<td>$0.19</td>
<td>$6</td>
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</table>
## Glumetza Pricing

<table>
<thead>
<tr>
<th>Effective Date</th>
<th>Package</th>
<th>Each</th>
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</thead>
<tbody>
<tr>
<td>2017-04-24</td>
<td>$8,955</td>
<td>$99.4993</td>
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<tr>
<td>2015-07-31</td>
<td>$12,023</td>
<td>$133.596</td>
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<td>2015-06-18</td>
<td>$8,015</td>
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<td>2014-06-03</td>
<td>$1,335</td>
<td>$14.8440</td>
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<td>2013-05-30</td>
<td>$1,161</td>
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<tr>
<td>2013-01-09</td>
<td>$1,074</td>
<td>$11.9400</td>
</tr>
<tr>
<td>2012-07-30</td>
<td>$994</td>
<td>$11.0520</td>
</tr>
</tbody>
</table>
Doxycycline

- Hyclate vs monohydrate
- Basically same thing
- Uptodate= doxycycline
  - No mention of hyclate or monohydrate

Cost
- Hyclate 100mg #60
  - $41
- Monohydrate 100mg #60
  - $33
Scams

Oracea
- Doxycycline monohydrate capsule 40 mg #30
  - $484

Generic
- Doxycycline monohydrate capsule 50mg #30
  - $15
- Doxycycline monohydrate tablets 50mg #30
  - $28

Solodyne
- Minocycline ER tablets
  - $172

Generic
- Minocycline IR capsules 50mg #60
  - $21
- Minocycline IR tablets 50mg #60
  - $90
Opioid Rules

Ohio
• Acute pain only
• No mention of chronic
• No more than 7 days adults
• No more than 5 days kids
• 30 MED average/day
• Does not apply
  – Cancer, hospice etc

New Jersey
• Acute pain only
• 5 day supply
• After 4 days can give a 30 day supply
• 3rd script must have pain contact
West Virginia
780 million oxy/hydro
433 pills for every man, woman, and child in WV

Oxycodone
• 224,260,980 doses
• 2007 to 2012

Hydrocodone
• 555,808,292 doses
• 2007 to 2012

Kermit WV
Population 392
9 million hydrocodone tabs
(over 2 years from 1 pharmacy)
Question 1

• Abuse deterrent opioids...
  – A) have been shown to reduce accidental opioid deaths by approximately 20% in US based studies
  – B) Have been shown to reduce opioid abuse in U.S. cities, but only via the nasal and intravenous routes
  – C) Have not been shown to reduce opioid abuse
Question 2

• Which statement is correct?
  – A) Basaglar is a biosimilar insulin, bioequivalent to Lantus
  – B) Basaglar is not a biosimilar, but is a bioequivalent generic to Lantus
  – C) Basaglar can be substituted for Lantus at a pharmacy as long as the Rx doesn’t say “dispense as written”
  – D) Basaglar is about 17% less expensive than Lantus