One Day P&T Competition University of Houston College of Pharmacy

Project Description & Implementation Overview

The pharmacy and therapeutics (P&T) Competition has become an integral part of the University of Houston College of Pharmacy (UHCOP) Academy of Managed Care (AMCP) student chapter. To increase awareness and give additional opportunities for students to be exposed to aspects of P&T and formulary management, the One Day P&T Competition was developed.

Students will work in pairs to make a formulary recommendation based on a presented case study. They will only have 45 minutes to research, evaluate, and formulate their formulary recommendation. One of their resources will be a curated document about the drug that will simulate the eDossier. The information in the document will be sourced from Lexicomp, the package inserts, and other sources available to working pharmacists. Afterwards, they will have 10 minutes to present their recommendation to judges and answer any questions pertaining to their presentation.

Competition Overview:

- The teams signed up for time slots for presentation. Their research period starts 45 minutes before that time.
- The participants needed to bring a laptop but no other source material such as printed out lecture notes, textbooks, etc. were allowed. Participants could use any outside resource accessible through the internet such as Clinical Pharmacology or Micromedex for the research phase. They were not allowed to contact any persons or organizations during the research time or ask questions about the actual case study.
- The case study is released to the team a few minutes before their research time begins. Teams researched in a single room spread out from each other.
- A worksheet is given for the team to fill out outlining their formulary recommendation and rationale. At the end of the research period, this sheet was printed out and used by the judges to assist with their judging.
- At the end of the research period, the team is escorted to a second room where the judges will be evaluating their presentation based off a prepared rubric.

Purpose Of The Project

The P&T Local competition is a unique opportunity for students to receive active experience on aspects of formulary management which, due to location and curriculum, students are at a disadvantage of learning. The local competition allows students to apply their clinical knowledge, test their ability to evaluate literature, practice presentation skills, and more. This competition typically occurs over the months of November to January and requires rigorous research and preparation. Because of this fact, many students have conflicts that prevent them from participating in the P&T Competition.

The new One Day P&T Competition is designed to give students a way to use the same skill set required for the P&T Competition in a condensed time span. This new competition will not be able to replace the local and national P&T Competition. Rather, the goal is to enhance the effectiveness of the P&T Competition by presenting additional opportunities to utilize this unique skill set. This competition aims to give students a small representation of the local and national competition by highlighting the same clinical and economical knowledge required. This competition will also require strong critical thinking and decision making in a quick period because of the time constraint of research and evaluation, which will be considered by the judges in presentation judging.

Project Budget: Expenses and Revenues

- 1. Student pharmacist and guest judges = \$0
- 2. Starbucks gift card = \$20
 - a. Prize for the winning team
- 3. There was no revenue collected during this event.

Who And How Many Chapter Members Are Involved?

In order to plan this event and conduct it, the President, President-Elect, and two P&T Competition Chairs worked closely together to organize the event. As this was the first year for a competition of this type, a limit of 9 teams or 18 students could compete.

Who Should Be Targeted? Audience or Involvement? How Do You Find Them? How Do You Contact?

Audience: This competition was designed to spark and increase interest in the area of P&T and the P&T Competition. The One Day Competition was opened to the entire University of Houston College of Pharmacy. Flyers and signup sheets were sent out to all student pharmacist to find interested students. Announcements and explanations of the event were also made during AMCP meeting or events to increase interest.

Judges: To mimic the Local P&T Competition, at least two judges were needed to conduct the competition. Prominent pharmacists in the area with P&T experience were recruited to help judge this event. In the end, Dr. Douglas Thornton and Dr. Amanda Mann graciously gave up their time to help judge this competition. Dr. Douglas Thornton is the AMCP co-advisor and assistant professor of pharmaceutical health outcomes and policy. Dr. Amanda Mann is a clinical pharmacy supervisor at Cigna-HealthSpring with over 3 years of Medicare Part D coverage experience.

What Materials Are Needed? Outside Resources, Ordering, etc.?

Venue: The competition required two separate rooms and took place within our pharmacy building.

Resources: Computer, projector, and printer were needed for the competition.

Information resources: Our P&T chairs looked to outside resources to obtain information to create a mock e-dossier for the competition:

- AMCP.org
- Lexicomp
- Micromedex Red Book
- PubMed
- ClinicalTrials.gov
- Up To Date

Timeline For Implementation and Execution

Two months before event or earlier to a potential event:

- 1. Contact guest judges
- 2. Confirm date and reserve venue
- 3. Create the curated items for competition: Case study, mock e-dossier, judging rubrics

One month before event:

- 1. Advertise/promote event to the whole college of pharmacy through emails, Facebook, and in class announcements up until the event
- 2. Open signup to entire student body.

One week before event:

- 1. Send reminder emails about the event and signup for timeslots
- 2. Get prize for winning team and thank you items for judges
- 3. Send judges case study and rubric

The day of event:

- 1. Have coordinators ensure the event is running smoothly and on time
- 2. Print judging rubrics for judges
- 3. Documentation of event through pictures
- 4. Thank student pharmacist and judges

Within week after the event:

1. Meet with officers to discuss pros and cons of the event and how to improve the event for next year

Follow-up With Faculty Members/Volunteers/Participants

All participating students, faculty, and judges were thanked via email and thank you cards when appropriate. The top 2 teams were announced and prizes for first place team were given a few days later. Additionally, the officers had a meeting to discuss pros, cons, and improvements for the following year.

Project Evaluation:

- What Went Well: Overall, this event went very well for a first-time event. Many pharmacy students that were hesitant in participating in the local competition were now able to learn more about P&T in an abbreviated setting. Overall, everyone gained valuable experience from this competition. It was a way for people unfamiliar with the P&T competition to get some exposure to the P&T and how the competition would be like. For people familiar with the competition, they were able to practice their skills before the local competition.
- What Didn't: Areas of improvement were identified by feedback received from judges, participants, and coordinators. The time limit to research and prepare presentations was found to be too short and should be increased to at least 1.5 hours. Secondly, our case study linked to several documents over a google drive link that was unable to open for several contestants. In the future a different method should be used such as linking pdfs. A third area of possible improvement is to give the judges small 5 minute breaks to give them time to confer.
- How To Improve For The Next Year: As the first year, the competition was limited to only 9 teams to test out the mechanics of the competition. For future years, the competition can be expanded with stronger advertising and include more participants. There can even be two separate brackets of different education level (i.e. teams including at least one p3 and teams not including a P3). If enough judges are available to judge, there does not have to be a limit on participants.

Project Checklist/Timeline:

- Create curated documents for competition: Case study, mock e-dossier, judging rubrics
- Secure date, time, and location
- Contact judges that would be interesting in contributing
- Publicize event
 - o Create flyers, send emails, post on Facebook, make in class announcements
 - Send out sign-up sheets
- Have teams sign up for time slots
- Send judges case study and rubric
- Send follow up thank you cards to judges
- Announce winners and give prizes
- Collect feedback from attendees and organizers after the event



1 HOUR PRACTICE FOR THE LOCAL P&T COMPETITION

OCTOBER 15TH STARTING AT 4:30PM ROOMS 3001/3007

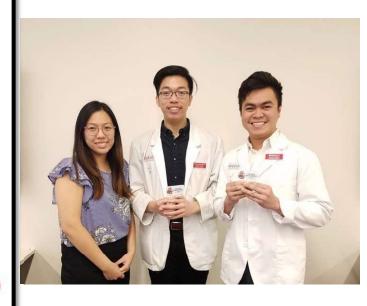
BENEFITS:

- WILL GIVE YOU INSIGHT INTO FORMULARY
MANAGEMENT

- IT IS A STRONG RESUME BUILDER

- THERE WILL BE A PRIZE FOR THE WINNING

TEAM!!!!













Case Study: Synjardy (empagliflozin and metformin) for Vantage Health Plan
P&T Committee

Permissions and Disclaimer

This material was created and curated for the specific purpose of the 2018 One Day P&T Competition.

Organizations and individuals are prohibited from reusing material contained herein. This includes any quantity redistribution of the material or storage of the material on electronic systems for any purpose other than personal use in the Competition.

While this team exercise involves the use of an actual product dossier and model, the exercise is not meant to illustrate either effective or ineffective handling of the formulary management issues within a managed care organization.

Vantage Health Plan

Vantage Health Plan provides coveraOkge to 2.90 million people in Texas and pays for more than \$689 million of outpatient ("retail") prescription drugs each year. Vantage has its own P&T Committee that meets quarterly. Vantage Pharmacy and Therapeutics Committee, includes both internal and external physicians, pharmacists, and pharmacoeconomic experts, that meets regularly to provide clinical reviews of all medications. They also determine coverage and tier status for all medications.

At its next meeting, the Vantage P&T Committee will review the formulary status of Synjardy (empagliflozin/metformin). I so an FDA approved prescription medicine with adjunct to diet and exercise to improve glycemic control in adults with type 2 diabetes mellitus when treatment with both empagliflozin and metformin is appropriate. Note: Empagliflozin is also indicated for risk reduction of cardiovascular mortality in adults with type 2 diabetes mellitus and established cardiovascular disease.

Vantage Health Plan uses a single formulary for all of its prescription programs.

Cost	Tier	What's covered	Helpful Hints
Lowest cost	1	Medications that provide the highest overall value. Mostly generic drugs. Some brand- name drugs may also be included.	Use Tier 1 drugs for the lowest out-of-pocket costs.

Mid-range	2	Medications that provide good overall value. A mix of brand-name and generic	Use Tier 2 drugs, instead of Tier 3, to help reduce your out-of-pocket costs.
Higher cost	3	Medications that provide the lowest overall value. Mostly brand-name drugs, as well as some generics.	Ask your doctor if a Tier 1 or Tier 2 option could work for you.

Vantage Plan Demographics

Covered lives 2,900,000

Gender distribution 56.4% female; 43.6% male

Age distribution <18 years: 12.1%; 18-64 years: 61.2%; ≥65 years: 26.7%

<u>Prescription Benefit – Type 2 Diabetes</u>

Oral Medications:

Drug Name	Drug Tier	Requirements & Limits
Acarbose	3	QLL
Farxiga (dapagliflozin)	3	QLL
Glimepiride	1	
Glipizide	1	
Glipizide XR	1	
Glyburide	1	
Glyxambi (empagliflozin/linagliptin)	3	PA,QLL
Invokamet (canagliflozin/metformin)	2	QLL
Invokamet XR (canagliflozin/metformin XR)	2	QLL
Invokana (canagliflozin)	2	QLL
Janumet (sitagliptin/metformin)	3	QLL
Janumet XR (sitagliptin/metformin XR)	3	QLL
Januvia (sitagliptin)	3	QLL
Jardiance (empagliflozin)	2	QLL
Jentadueto (linagliptin/metformin)	2	QLL
Jentadueto XR (linagliptin/metformin XR)	2	QLL
Kombiglyze XR (saxagliptin/metformin XR)	2	QLL
Metformin	1	
Metformin XR	1	
Pioglitazone	1	
Pioglitazone/metformin	2	QLL
Pioglitazone/metformin XR	2	QLL
Onglyza (saxagliptin)	2	QLL
Tradjenta (linagliptin)	2	QLL
Xigduo XR (dapagliflozin/metformin XR)	3	PA, QLL

Injectable Medications:

Non-Insulin

Drug Name	Drug Tier	Requirements & Limits
Adlyxin (lixisenatide)	3	PA, QLL
Bydureon (exenatide XR)	2	QLL
Byetta (exenatide)	2	QLL
SymlinPen (pramlintide)	3	PA, QLL
Trulicity (dulaglutide)	3	PA, QLL
Tanzeum (albiglutide)	2	QLL
Victoza 2- Pak (liraglutide)	2	QLL
Victoza 3-Pak (liraglutide)	3	QLL

Insulin

Drug Name	Drug Tier	Requirements & Limits
Afrezza (inhaled insulin)	3	PA, QLL
Apidra (insulin glulisine)	3	PA, QLL
Humalog Vials (insulin lispro)	1	QLL
Humulin Vials (regular insulin)	1	QLL
Lantus Vials (insulin glargine)	3	PA, QLL
Novolog Vials (insulin aspart)	3	QLL
Levemir Vials (insulin detemir)	2	QLL
Toujeo (insulin glargine U-300)	3	PA, QLL
Tresiba (insulin degludec)	3	PA, QLL

PA = Prior authorization is required for coverage QLL

= Quantity limits may apply

XR = Extended Release

Instructions: Fill out the Recommendation/Rationale document to the best of your knowledge. Below is helpful information you can use to formulate your recommendation.

- 1. Synjardy[®] Drug Monograph
- 2. Clinical Trials Overview (only section 14):

Full articles of selected clinical trials are linked for your convenience but may not be required

- 1. <u>Empagliflozin Add-On Combination Therapy with Metformin:</u>
- 2. Empagliflozin Initial Combination Therapy with Metformin
- 3. <u>Empaqliflozin Cardiovascular Outcome Study in Patients with Type 2 Diabetes Mellitus and Atherosclerotic Cardiovascular Disease</u>

Team Members:

2018 One-Day P&T Competition

Answer the two questions in its entirety to the best of your knowledge. This page will be given to the judges during your presentation. You may use more than the allotted space if needed. At the end of your preparation session, print **2 copies** of the document to the pharmacy black and white printer with the password 'one day' and we will print it for you.

Recommendation:

Be specific about your formulary recommendation. Possible things to mention, if applicable to your recommendation, are: patient criteria, dosage, monitoring, reimbursement.

2018 One-Day P&T Competition Judging Rubric

Team Members:

Rationale:

Be specific and use citable facts that lead to your formulary recommendation. Key considerations can be, but are not limited to: effectiveness, safety, clinical, economic, comparative medications.

Component	Scoring Considerations	
Written Recommendation	 Clear recommendation Recommendations are consistent with presented evidence May consider, but not limited to: efficacy, safety, costeffectiveness, care guidelines, follow up of recommendation 	0 to 15 points
Oral Presentation	 Content of presentation: accurate, clear, knowledgeable, organization of structure and coherence Verbal skills: clear voice, enunciation, correct pronunciations Non-verbal skills: body language, eye contact Consistency of team members in knowledge and contribution 	0 to 10 points
Question & Answer Session	 Ability to answer questions Clinical knowledge Clarity of responses Consistency of team members in knowledge and contribution 	0 to 5 points
Total		

Judge Comments:

Please be as clear and detailed as possible. These comments will be shared with the competitors to help improve their presentations skills as well as guiding their thinking when approaching P&T decisions.





Pharmacy & Therapeutics Committee Drug Monograph Empagliflozin/ Metformin (Synjardy® - Boehringer Ingelheim)

Contents

- I. Pharmacology
- II. Pharmacokinetics
- **III.** Clinical Efficacy
- IV. Adverse Reactions/Precautions/Contraindications
 - V. Drug Interactions
- VI. Dosage and Administration
- VII. Cost
- VIII. References

I. Pharmacology

- A. Empagliflozin is utilized for the treatment of type II diabetes and is part of the gliflozin class. These agents inhibit the sodium-glucose cotransporter 2 (SGLT2) that is located in the proximal renal tubules. As a result of this inhibition, urinary glucose excretion is increased.
- B. Metformin is also utilized for the treatment of type II diabetes and is part of the biguanide class. This agent exhibits major effect in the liver by decreasing glucose production and has minor effects in the muscle by increasing peripheral glucose uptake. In addition to this, it improves insulin sensitivity.

II. Pharmacokinetics

- A. Empagliflozin
 - Protein binding: 86.2%
 - a) t1/2: 12. 4 hours
 - b) Time to peak: 1.5 hours
 - Volume of distribution (Vd): 72.8 L
 - Metabolism: glucuronidation by UGT2B7; minor metabolites via UGT1A3, UGT1A8, and UGT1A9
 - Excreted:
 - a) Urine (54.4%; 50% unmetabolized)
 - b) Feces (41.2 %; majority unmetabolized)

B. Metformin

- Bioavailability: 50-60% when fasting
 - a) Protein binding: negligible
 - b) t1/2: 4-9 hours (plasma), 17.6 hours (blood)
 - c) Time to peak: 2-3 hours (IR), 7 hours (ER) with a range of 4-8 hours
 - d) Onset of action: days; takes up to 2 weeks for max effects
- Volume of distribution (Vd): 654 + 385 L
- Metabolism: not metabolized
- Excretion: urine (90% unmetabolized)

III. Clinical Efficacy

See Additional Documents for more detailed information

A. The additional indication for Synjardy was based on a Phase III, double-blind, randomized, active-controlled study that evaluated the efficacy and safety of empagliflozin in combination with metformin as initial therapy compared with treatment with either empagliflozin or metformin alone. At 24 weeks, combination treatment displayed significant reductions in hemoglobin A1c as compared to treatment with either component alone.

IV. Adverse Effects/Precautions/Contraindications

- A. Empagliflozin Adverse Effects
 - Black Box Warning: Rarely, metformin may cause an acid health problem in the blood (lactic acidosis). The risk of lactic acidosis is higher in people with kidney problems and in people who take certain other drugs like topiramate. The risk is also higher in people with liver problems or heart failure, in older people (65 or older), or with alcohol use. The risk is also higher in people who are having an exam or test with contrast, surgery, or other procedures. If lactic acidosis happens, it can lead to other health problems and can be deadly. Lab tests to check the kidneys may be done while taking this drug.
 - Urinary tract infections (>10%)
 - a) females: 18%, males: 4%
 - Dyslipidemia (4%)
 - Increased thirst & nausea (2%)
 - Increased hematocrit (3-4%)

B. Metformin Adverse Effects

■ Diarrhea (IR: 12-53%, ER: 10-17%)

■ Nausea and vomiting (IR: 26%, ER: 7%)

■ Flatulence (4-12%)

C. Precautions

- Cardiovascular: Intravascular volume contraction and symptomatic hypotension may occur, especially in elderly patients or those with renal impairment, low systolic blood pressure, or taking diuretics; correct volume status before initiating and monitoring recommended.
- Concomitant use: Excessive alcohol use should be avoided
- Endocrine and metabolic: Ketoacidosis, including fatalities, has been reported with empagliflozin and may result in hospitalization; monitoring is recommended and discontinue if suspected.
- Endocrine and metabolic: Increased risk of hypoglycemia when used with insulin or insulin secretagogues; dosage adjustment may be necessary
- Endocrine and metabolic: Reversible decreases in serum vitamin B12 levels, which are rarely associated with anemia or neurologic symptoms, have been reported with metformin; monitoring recommended.
- Endocrine and metabolic: Increases in LDL-C may occur with empagliflozin; monitoring recommended
- Geriatric: Increased risk of volume depletion-related adverse events and urinary tract infections in patients 75 years or older

- Hepatic: Avoid use in patients with hepatic impairment due to increased risk of lactic acidosis.
- Immunologic: Hypersensitivity reactions (including angioedema) have been reported; discontinuation required
- Radiologic studies with contrast media: Acute decrease in renal function and lactic acidosis may occur; discontinuation may be necessary and monitoring recommended.
- Renal: Acute kidney injury, sometimes requiring dialysis and hospitalization, has been reported. Increased risk in patients with hypovolemia, chronic renal insufficiency, congestive heart failure, and concomitant use of medications (eg, diuretics, ACE inhibitors, angiotensin II receptor blockers, and NSAIDs); monitoring recommended and discontinuation may be required
- Renal: New or worsening renal impairment may occur, especially in elderly patients; monitoring recommended and discontinuation may be necessary
- Renal: Urinary tract infections resulting in life-threatening urosepsis and pyelonephritis have been reported; monitoring recommended
- Reproductive: Rare, serious cases of Fournier gangrene have been reported with sodium-glucose cotransporter-2 (SGLT2) inhibitors; if suspected, institute antibiotics and surgical debridement if appropriate; discontinue use of the SGLT2 inhibitor and provide alternative therapy for glycemic control.
- Reproductive: Genital mycotic infections may occur, especially in patients with history of chronic or recurrent genital mycotic infections; monitoring recommended.
- Respiratory: Hypoxic states (eg, acute congestive heart failure, cardiovascular collapse or shock, acute myocardial infarction, sepsis) may lead to lactic acidosis; discontinue use.
- Special populations: Elderly patients are at increased risk of lactic acidosis; monitoring recommended
- Surgery: Discontinue use temporarily for surgical procedures requiring restricted food or fluid intake.

D. Contraindications

- Acute or chronic metabolic acidosis, including diabetic ketoacidosis
- History of serious hypersensitivity to empagliflozin, metformin hydrochloride, or any component of the product
- Moderate to severe renal impairment (estimated eGFR < 45 mL/min/1.73 m^2), ESRD, or dialysis

V. Drug Interactions

This medicine may also interact with the following medications:

- acetazolamide
- alcohol
- amiloride
- certain medicines for blood pressure like amlodipine, felodipine, nifedipine
- cimetidine
- dichlorphenamide
- digoxin
- diuretics
- female hormones, like estrogens or progestins and birth control pills
- isoniazid
- medicines for blood pressure, heart disease, irregular heart beat
- morphine
- nicotinic acid
- phenothiazines like chlorpromazine, mesoridazine, prochlorperazine, thioridazine
- phenytoin
- procainamide
- quinidine
- quinine
- ranitidine
- steroid medicines like prednisone or cortisone
- thyroid medicines
- topiramate
- triamterene
- trimethoprim
- vancomycin
- Zonisamide
- gatifloxacin
- certain contrast medicines given before X-rays, CT scans, MRI, or other procedures

VI. Dosage and Administration

- A. Initialization requires individualization based on the patient's current regimen. For patients on metformin, empagliflozin can be added at 10 mg/day with a similar daily dose of metformin. The regimen can be administered in 2 divided doses with the immediate release formulation or once daily with breakfast with the extended release formulation.
- B. For patients currently on empagliflozin, metformin 1,000 mg/day with a similar dose

of empagliflozin can be administered. The regimen can be administered in 2 divided doses with the immediate release formulation or once daily with breakfast with the extended release formulation. ER formulation should not be split, crushed, chewed, or dissolved.

C. Maximum dosage: Empagliflozin 25 mg/metformin 2,000 mg/day

VII. Cost

Drug Name	Cost
	Oral Medications
Glimepiride	Tablets • 1 mg (per each): \$0.40 - \$1.08 • 2 mg (per each): \$0.64 - \$1.75 • 4 mg (per each): \$1.22 - \$3.30
Glyburide	 Tablets 1.25 mg (per each): \$0.28 2.5 mg (per each): \$0.31 - \$0.46 5 mg (per each): \$0.24 - \$0.78
Glyxambi (empagliflozin/linagliptin)	Tablets • 10-5 mg (per each): \$20.94 • 25-5 mg (per each): \$20.94
Invokamet (canagliflozin/metformin)	Tablets
Invokamet XR (canagliflozin/metformin)	Tablets
Invokana (canagliflozin)	Tablets100 mg (per each): \$18.58300 mg (per each): \$18.58
Januvia (empagliflozin)	Tablets • 25 mg (per each): \$17.18 • 50 mg (per each): \$17.18 • 100 mg (per each): \$17.18
Jentadueto (linagliptin/metformin)	Tablets • 2.5-500 mg (per each): \$8.23 • 2.5-850 mg (per each): \$8.23 • 2.5-1000 mg (per each): \$8.23
Jentaduto XR (linagliptin/metformin)	Tablets • 2.5-1000 mg (per each): \$8.23 • 5-1000 mg (per each): \$16.46
Kombiglyze XR (saxagliptin/metformin	Tablets • 2.5-1000 mg (per each): \$8.16
	5-500 mg (per each): \$16.335-1000 mg (per each): \$16.33

Metformin	Tablets			
Metformin XR	Tablets • 500 mg (per each): \$1.21 • 750 mg (per each): \$1.81			
Pioglitazone	Tablets ■ 15 mg (per each): \$0.07 - \$7.01 ■ 30 mg (per each): \$0.10 - \$10.72 ■ 45 mg (per each): \$0.11 - \$11.63			
Pioglitazone/metformin	Tablets • 15-500 mg (per each): \$5.33 • 15-850 mg (per each): \$5.33			
Pioglitazone/metformin XR	Tablets • 15-1000 mg (per each): \$12.79 • 30-1000 mg (per each): \$25.34			
Onglyza (saxagliptin)	Tablets • 2.5 mg (per each): \$16.33 • 5 mg (per each): \$16.33			
Tradjenta (linagliptin)	Tablet • 5 mg (per each): \$16.46			
Synjardy® (empagliflozin/metformin)	Tablets • 5-500 mg (per each): \$9.30 • 5-1000 mg (per each): \$9.30 • 12.5-500 mg (per each): \$9.30 • 12.5-1000 mg (per each): \$9.30			
Synjardy® XR (empagliflozin/metformin)	Tablets			
Injectable Non-insulin				
Bydureon (exenatide XR)	Auto-injector			
Byetta (exenatide)	Auto-injector • 2MG/0.85ML (per 0.85 mL): \$198.05 Pen-injector • 2 mg (per each): \$198.05 Solution Pen-injector • 10 mcg/0.04 mL (per mL): \$354.19			
	Solution Pen-injector • 5 mcg/0.02 mL (per mL): \$708.38			

Victoza	Solution Pen-injector (Saxenda Subcutaneous) • 18 mg/3 mL (per mL): \$96.03 Solution Pen-injector (Victoza Subcutaneous) • 18 mg/3 mL (per mL): \$116.05
	Insulin
Humalog Vials (insulin lispro)	Solution ■ 100 units/mL (per mL): \$28.02
Humulin Vials (regular	Suspension
insulin)	 100 units/mL (per mL): \$17.84
Lantus Vials (insulin glargine)	Solution ■ 100 units/mL (per mL): \$32.35
Novolog Vials (insulin aspart)	Solution • 100 units/mL (per mL): \$34.72

XR = Extended Release

VIII. References

- Empagliflozinandmetformin. Lexi-Drug. Lexicomp. Wolters Kluwer Health, Inc. Riverwoods, IL. Available at: https://online.lexi.com/lco/action/doc/retrieve/docid/patch f/5808535
- 2. Empagliflozin. Lexi-Drug. Lexicomp. Wolters Kluwer Health, Inc. Riverwoods, IL. Available at: https://online.lexi.com/lco/action/doc/retrieve/docid/patch-f/5279964
- 3. Metformin. Lexi-Drug. Lexicomp. Wolters Kluwer Health, Inc. Riverwoods, IL. Available at: .https://online.lexi.com/lco/action/doc/retrieve/docid/patch_f/7260
- 4. Synjardy(R) [package insert]. Ridgefield, CT: Boehringer Ingelheim Pharmaceuticals, Inc.; 2017
- Synjardy. Clinical Pharmacology. Elsevier, Inc. Tampa, FL. Available at: http://www.clinicalpharmacology.com/Forms/drugoptions.aspx?cpnum=4709&n=Synjardy&t=0&enh=1