#### UNITED STATES SECURITIES AND EXCHANGE COMMISSION Washington, D.C. 20549

#### FORM 8-K

## CURRENT REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934

Date of Report (Date of earliest event reported): September 12, 2017

	TherapeuticsMD, Inc.	_
	(Exact Name of Registrant as Specified in its Charter)	_
Nevada	001-00100	87-0233535
(State or Other Jurisdiction of Incorporation)	(Commission File Number)	(IRS Employer Identification No.)
	6800 Broken Sound Parkway NW, Third Floor Boca Raton, FL 33487	
	(Address of Principal Executive Office) (Zip Code)	
Regis	trant's telephone number, including area code: (561) 961-19	900
Check the appropriate box below if the Form 8-K provisions:	filing is intended to simultaneously satisfy the filing obliga	tion of the registrant under any of the following
☐ Written communications pursuant to Rule 425 u	nder the Securities Act (17 CFR 230.425)	
☐ Soliciting material pursuant to Rule 14a-12 under	er the Exchange Act (17 CFR 240.14a-12)	
☐ Pre-commencement communications pursuant to	o Rule 14d-2(b) under the Exchange Act (17 CFR 240.14d-	2(b))
☐ Pre-commencement communications pursuant to	o Rule 13e-4(c) under the Exchange Act (17 CFR 240.13e-	4(c))
Indicate by check mark whether the registrant is chapter) or Rule 12b-2 of the Securities Exchange	an emerging growth company as defined in Rule 405 of Act of 1934 (§240.12b-2 of this chapter).	the Securities Act of 1933 (§ 230-405 of this
Emerging growth company $\Box$		
If an emerging growth company, indicate by check	mark if the registrant has elected not to use the extended	transition period for complying with any new or

revised financial accounting standards provided pursuant to Section 13(a) of the Exchange Act.  $\Box$ 

#### Item 7.01 Regulation FD Disclosure.

TherapeuticsMD, Inc. is furnishing as Exhibit 99.1 to this Current Report on Form 8-K an investor presentation which will be used, in whole or in part, and subject to modification, on September 12, 2017 and at subsequent meetings with investors or analysts.

The information in this Current Report on Form 8-K (including the exhibit) is being furnished pursuant to Item 7.01 of Form 8-K and shall not be deemed to be "filed" for the purpose of Section 18 of the Securities Exchange Act of 1934, as amended, or otherwise subject to the liabilities of that section, nor will any of such information or exhibits be deemed incorporated by reference into any filing under the Securities Act of 1933, as amended, or the Securities Exchange Act of 1934, as amended, except as expressly set forth by specific reference in such filing.

#### Item 9.01. Financial Statements and Exhibits.

(d) Exhibits.

Exhibit

Number Description

99.1 TherapeuticsMD, Inc. presentation dated September 2017.

#### **SIGNATURES**

Pursuant to the requirements of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned hereunto duly authorized.

Date: September 12, 2017 THERAPEUTICSMD, INC.

By: /s/ Daniel A. Cartwright

Name: Daniel A. Cartwright
Title: Chief Financial Officer

#### EXHIBIT INDEX

Exhibit

<u>Number</u> <u>Description</u>

<u>99.1</u> <u>TherapeuticsMD, Inc. presentation dated September 2017.</u>



## **Forward-Looking Statements**

This presentation by TherapeuticsMD, Inc. (referred to as "we" and "our") may contain forward-looking statements. Forward-looking statements may include, but are not limited to, statements relating to our objectives, plans and strategies, as well as statements, other than historical facts, that address activities, events or developments that we intend, expect, project, believe or anticipate will or may occur in the future. These statements are often characterized by terminology such as "believe," "hope," "may," "anticipate," "should," "intend," "plan," "will," "expect," "estimate," "project," "positioned," "strategy" and similar expressions and are based on assumptions and assessments made in light of our managerial experience and perception of historical trends, current conditions, expected future developments and other factors we believe to be appropriate.

Forward-looking statements in this presentation are made as of the date of this presentation, and we undertake no duty to update or revise any such statements, whether as a result of new information, future events or otherwise. Forward-looking statements are not guarantees of future performance and are subject to risks and uncertainties, many of which are outside of our control. Important factors that could cause actual results, developments and business decisions to differ materially from forward-looking statements are described in the sections titled "Risk Factors" in our filings with the Securities and Exchange Commission, including our most recent Annual Report on Form 10-K and Quarterly Reports on Form 10-Q, as well as Current Reports on Form 8-K, and include the following: our ability to resolve the deficiencies identified by the FDA in our new drug application for our TX-004HR product candidate and the time frame associated with such resolution; whether the FDA will agree with our proposal to resubmit an amended NDA for our TX-004HR product candidate; whether we will be able to prepare an amended NDA for our TX-004HR product candidate and, if prepared, whether the FDA will accept and approve the NDA; our ability to maintain or increase sales of our products; our ability to develop, protect and defend our intellectual property; our ability to develop and commercialize our hormone therapy drug candidates and obtain additional financing necessary therefor; whether we will be able to prepare an NDA for our TX-001HR product candidate and, if prepared, whether the FDA will accept and approve the NDA; the length, cost and uncertain results of our clinical trials; the potential of adverse side effects or other safety risks that could preclude the approval of our hormone therapy drug candidates; our reliance on third parties to conduct our clinical trials, research and development and manufacturing; the availability of reimbursement from government authorities and health insurance companies for our products; the impact of product liability and other lawsuits; the influence of extensive and costly government regulation; the volatility of the trading price of our common stock and the concentration of power in our stock ownership.

TX-004HR, TX-001HR, TX-005HR, and TX-006HR are investigational drugs and are not approved by the FDA. This non-promotional presentation is intended for investor audiences only.

PDF copies of press releases and financial tables can be viewed and downloaded at our website: www.therapeuticsmd.com/pressreleases.aspx.

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## Two Late Stage Women's Health Assets With **Large Total Addressable Market Opportunities** TX-004HR TX-001HR Moderate to severe dyspareunia, a **Proposed Indication** symptom of VVA, due to menopause due to menopause

**Condition Description** 

**Active Ingredients** 

Form

**Key Value Proposition** 

Affected US Population

**US TAM Opportunity** 

VVA due to Menopause

Bio-Identical 17 β-Estradiol

Vaginal softgel capsule

Easy to use, negligible systemic exposure, designed to support long-term use

32 million women<sup>1,2</sup>

>\$20B5

Complete Response Letter: May 5, 2017 Ongoing Review Meeting: Nov. 3, 2017 Moderate to severe hot flashes

Menopause

Bio-Identical 17 β-Estradiol + **Bio-Identical Progesterone** 

Oral softgel capsule

Potential first and only bio-identical FDA-approved combination product

36 million women<sup>3</sup>

>\$25B4,5

Positive Phase 3 topline data NDA submission expected 4Q17

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The North American Monopause Society, Management of symp Menopause, 2013;20(9):388–902.
 Gass ML, Cochrane BL, Larton LL, et al. Patterns and predictors Menopause, 2011;8(1):1180–1171.
 Special Consultation of Society (Society Consultation)
 Based on pre-WHI annual scripts of FDA-approved HT products 5) Based on market pricing of current FDA-approved HT products

## **Seasoned Management Team with a Proven Track Record of Commercial Execution**



Chairman of the Board

- Former U.S. Secretary of Health and Human Service
   Page 1999 (2001-2005)
- · Holds multiple board memberships, including Centene and United Therapeutics
- · 40-year public health career



- Former Chief Executive Officer and Chief Financial Officer of Shire PLC
- Former Vice President of Corporate Finance at AstraZeneca
   Holds multiple board
- memberships, including Chairman of Revance Therapeutics



- Former President and Chief Executive Officer of
- Boehringer Ingelheim (U.S.)

  Former EVP of Customer
  Marketing and Sales of
  U.S. Human Health at Merck
- · Holds multiple board memberships, including



- in 2008
- Co-founded CareFusion (Sold to Cardinal Health in 2006)
- 22 years of experience in early stage healthcare company development



- Co-founded vitaMedMD in 2008
- + 25 years of experience in healthcare/women's health
- Past OBGYN Department Chair Boca Raton Regional Hospital
- · Past ACOG Committee Member
- OBGYN trained University of Pennsylvania
- Chief Medical Officer
- Former Clinical Lead of Women's Health at Pfize
- + 15+ years of experience developing women's health products
- · Reproductive endocrinologist & infertility specialist





- · Co-founded CareFusion
- · Held executive sales and operation management positions at McKesson, Cardinal and Omnicell
- 20+ years of operations experience



- · Former CFO of American Wireless, Telegeography, and WEB Corp
- Participated in American Wireless/Arush Entertainment merger
- Former KPMG and PricewaterhouseCoopers accountant



- 20+ years of commercial and marketing experience
   SVP of the Pfizer
- Consumer Healthcare Wellness Organization
- Commercial lead for sales and marketing of the Pfizer Women's Health Division
- Head of Global Innovation at Weight Watchers International



- · 25+ years of pharmaceutical marketing, sales, and operations experience
- Led commercialization of anti-estrogens/estradiol, breast cancer, and ovarian cancer drugs



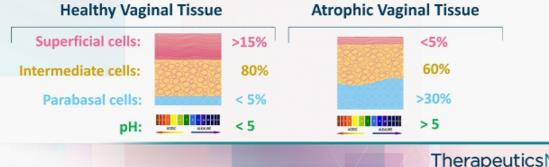
- 25\* years of women's health pharmaceutical experience
  - Product development leader for J&J, Wyeth, Aventis, and others
  - Worked on developmen Prempro®, Premphase® and Estalis®

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## **Vulvar and Vaginal Atrophy (VVA)**

- Chronic and progressive condition characterized by thinning of vaginal tissue from decreased estrogen levels
- Diagnosed in approximately 50% of postmenopausal women<sup>1</sup>
- Primary symptom = dyspareunia (painful intercourse)
- Secondary symptoms include: vaginal dryness, itching, irritation, bleeding with sexual activity, dysuria, urgency, frequency, recurrent UTIs, and incontinence
- Current treatments include: prescription creams, tablets, and rings in addition to over-the-counter lubricants



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### **Current US VVA Market Overview**



>\$20B Branded Total US Market Opportunity<sup>5</sup>

### 32M Women with VVA Symptoms<sup>1,2</sup>

#### ~50%, or ~16M seek treatment for VVA4

- Only 7%, or ~2.3M women, are currently being treated today with Rx hormone therapy (HT)<sup>3</sup>
  - Long-term safety concerns<sup>6</sup>
  - Efficacy<sup>6</sup>
  - Messiness<sup>6</sup>
  - Need for applicator<sup>6</sup>
- 18%, or ~5.7M women, are past HT users and were unsatisfied/unsuccessful with past treatments<sup>4</sup>
- 25%, or ~8M women, are users of OTC products\* such as lubricants that do not treat the underlying pathological cause of VVA nor halt or reverse symptoms<sup>4</sup>

#### ~50%, or ~16M women do not seek treatment for VVA4

- Lack of awareness that VVA is a treatable condition
- Estrogen exposure concerns

The North American Menapause Society, Management of symptomatic vulvious/and atrophy. 2013 position statement of The North American Menapause Society, Menapause 2013;38(9):888-902.
 Social ML, Codhane RB, Lavon IC, et al. Patterns and predictors of sexual activity among women in the homose the pay trials of the Women's Health Institute. Menapause 2013;18(13):1166-117.
 SOLIM Hooff The Claims (data) (2014) Not 2011.

4) TherapeuticsMD "EMPOWER" Survey, 2016

(i) We post, S et al. Management of Valginal Aroughly Implications from the REVINE Survey. Clinical Medicine Anights of Reproductive Medicine 2014 823-90 doi:10.10.1879/WHH-151.049

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## **Current FDA-Approved VVA Products**

	Estrace Cream®	Premarin Cream®	Vagifem®	Estring®	Osphena®	Intrarosa*
Products	ENTER ST	- Table		Englines	Ophris	INTRABOSA (Stational)
Allergan		Pfizer	novo nordisk	Pfizer	DUCHESNAY USA	A amag
FDA Approval	1984	1978	1999	1996	2013	2016
TRx Dollars 2016 <sup>1</sup>	\$511,035,880	\$505,351,340	\$502,715,665*	\$105,040,703	\$72,755,311	Approved 11/2016
Method of Admin	Vaginal Cream	Vaginal Cream	Vaginal Tablet	Ring	Oral Tablet	Vaginal Insert
Application	Reusable Vaginal Applicator	Reusable Vaginal Applicator	Vaginal Applicator	90-day Ring	Oral Daily SERM	Vaginal Applicator
Active Ingredient	100 mcg Estradiol	625 mcg/g Conjugated Equine Estrogens	10 mcg Estradiol	2,000 mcg Estradiol	60,000 mcg Ospemifene	6,500 mcg Prasterone
Average Maintenance Dose	100 mcg 2x/week	312.5 mcg 2x/week	10 mcg 2x/week	7.5 mcg daily	60,000 mcg daily	6,500 mcg daily
Onset of Action* Dyspareunia	Approval Without			Approval Without Week 12	Week 12	Week 6
Onset of Action* Dryness	Dyspareunia and Dryness Data	Not Demonstrated	Week 8	Dyspareunia and Dryness Data	Approval Without Dryness Data	Week 12
	luct Prescribing Head Comparati				*Onset of Action = First	efficacy observation
shony Health Solutions PHAST D 16 Vagilem and Yuvefem (autho 1 [package label] http://www.					Therar	euticsMD
in Vaginal Cream (package lob Vaginal Cream (package labe	el] http://labeling.pfizer.com/sho d] http://pi.actavis.com/data_stre	wlabeling.aspx?id=132 nm.asp?product_group=1880&p=pi8 ocs/label/2013/203505s000fsl.pdf	Manguage=E		Herak	For Her. For Life.

## **Compliance and Fills Per Year Drives Top-Line Revenue**

#### **Current VVA Market**

Vaginal Creams:

Reasons Women Stop

Vaginal Tablets: Reasons Women Stop

Average: 1.5 Fills Per Year<sup>2</sup>





Messiness1 Reusable Applicator<sup>1</sup> Long-term Safety<sup>1</sup>

Dose Preparation by User Required<sup>3</sup>

Average: 3.5 Fills Per Year<sup>2</sup>



Efficacy<sup>1</sup> Applicator<sup>1</sup> Long-term Safety<sup>1</sup> Systemic Absorption<sup>1</sup>

Product	TRx Dollars <sup>4</sup>	Patient Count⁵	Patient Share <sup>5</sup>
Estrace	\$511,035,880	868,052	39%
Premarin	\$505,351,340	750,185	34%
Vagifem/Yuvafem	\$502,715,665	433,187	20%

 Higher average fills per year enable Vagifem/Yuvafem to generate equal revenue as Premarin and Estrace with significantly less patients on therapy

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<sup>31</sup> Wysodk, S et al, Management of Vaginal Arrophy; implications from the 31 Total RefPatient Court
31 Total RefPatient Court
31 The North American Menopause Society, Management of symptomatic Menopause, 2012, 2095;888–902
41 Symphore Health Solutions PHAST Data powered by 104; Asnual 2016 51 MSSBM: Total Patient Trackey, Asnual 2016

## **TX-004HR: Product Candidate Profile**



- First vaginal estrogen (4 mcg and 10 mcg) with negligible systemic exposure
- Strong efficacy data on both dyspareunia and vaginal dryness with a 2-week onset of action
- Small, digitally inserted, rapidly dissolving softgel capsule without the need for an applicator
- Fraction of the dose (4 mcg, 10 mcg and 25 mcg) of many existing products (Premarin and Estrace)
- No patient education required for dose preparation or applicators
- Mechanism of action and dosing that is familiar and comfortable
- Proposed dose packaging to optimize compliance and convenience
- Strong patent estate with patent expirations starting 2032

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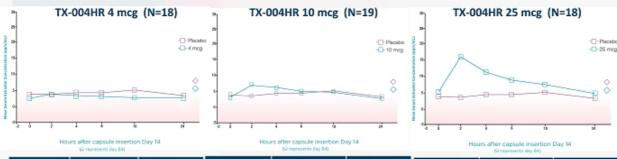
## Co-Primary and Key Secondary Efficacy Endpoints



	4 mcg	10 mcg	25 mcg
Superficial Cells	<0.0001	<0.0001	<0.0001
Parabasal Cells	<0.0001	<0.0001	<0.0001
Vaginal pH	<0.0001	<0.0001	<0.0001
Severity of Dyspareunia	0.0149	<0.0001	<0.0001
Severity of Vaginal Dryness	0.0014	<0.0001	<0.0001

MMRM P-value vs placebo LS = Least Squares

#### Arithmetic Mean Estradiol Serum Concentrations - Unadjusted



	AUC <sub>0-24</sub> (pg.h/mL)	C <sub>avg[0-24]</sub> (pg/mL)		AUC <sub>0-24</sub> (pg.h/mL)	C <sub>avg(0-24)</sub> (pg/mL)		AUC <sub>6-24</sub> (pg.h/mL)	C <sub>avg(0-24)</sub> (pg/mL)
4 mcg	87.22 (42.77)	3.634 (1.78)	10 mcg	110.14 (54.57)	4.58 (2.27)	25 mcg	171.56 (80.13)	7.14 (3.33)
Placebo (pl)	104.16 (66.38)	4.34 (2.76)	Placebo (PI)	104.16 (66.38)	4.34 (2.76)	Placebo (PI)	104.16 (66.38)	4.34 (2.76)
P-value vs Pl	0.3829	0.3829	P-value vs Pl	0.7724	0.7724	P-value vs. Pl	0.0108	0.0108

## TX-004HR New Drug Application (NDA) Background

- Type of Filing
  - 505(b)(2)
  - Ability to reference non-clinical and clinical safety data for estrogen available in medical literature

#### **FDA Guidance**

- 12-week study required for estrogen alone products
  - "We recommend that studies be randomized, double-blinded and of 12-week duration"1
- Lowest effective doses and exposures are prioritized
  - "Sponsors are encouraged to investigate dosing schedules and drug delivery systems that can achieve efficacy with lowest possible exposures"1
- Established Precedent Recent Estrogen Alone FDA Approvals

http://www.fda.gov/ucm/groups/fdagov-public/@fdagov-drugs-gen/documents/document/ucm071643.pdf

- Numerous estrogen alone products have been approved with 12-week endometrial safety data
  - Divigel, Evamist, Elestrin

Vulvar and Vaginal Atrophy Symptoms - Recommendations for Clinical Evaluation

TX-004HR has the lowest estrogen dose ever tested in an FDA-approved clinical trial

1. 2003 FDA Draft Guidance for Industry Estrogen and Estrogen/Progestin Drug Products to Treat Vasomotor Symptoms and Vulvar and Vaginal Atrophy Symptoms – Recommendations for Clinical English and Products to Treat Vasomotor Symptoms and Vaginal Atrophy Symptoms (Clinical English Colleges)

## **TX-004HR Complete Response Letter (CRL)**

- NDA for TX-004HR received a CRL on May 5, 2017
- There was <u>one approvability issue</u> identified by the FDA:
  - Lack of long-term endometrial safety data beyond the 12 weeks studied in the Rejoice Trial
    - No cases of endometrial hyperplasia were observed in the Rejoice Trial at the end of week 12 for all doses studied and included in the NDA
- There were no approvability issues identified by the FDA related to:
  - Clinical efficacy studied in the Rejoice Trial
  - Chemistry, Manufacturing, and Controls (CMC)

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## **TX-004HR Regulatory Update**

- Type A Meeting with the FDA directors of the Division of Bone, Reproductive, and Urologic Products (DBURP) and the Office of Drug Evaluation III (ODE III) - June 14, 2017
- Submitted additional endometrial safety information to the FDA July 5, 2017
  - Information on the "Uterine First Pass Effect"
    - Currently marketed estrogen products, when placed in the upper third of the vagina, can pass to the endometrium
    - TX-004HR was specifically designed to be placed in the lower third of the vagina, decreasing the likelihood of stimulating the endometrial tissue
  - Safety data from the Women's Health Initiative (WHI) Observational Study of long-term, realworld users of vaginal estrogens
- Received formal General Advice Letter August 3, 2017
  - Initial review of the additional endometrial safety information submitted completed by the FDA
    - The FDA requested that TXMD submit the additional endometrial safety information to the NDA for TX-004HR, including the WHI Observational Study, to aid in its comprehensive review of the medical literature regarding the use of vaginal estrogen products and the risk of endometrial hyperplasia or cancer
    - The FDA requested a November meeting with TXMD to discuss the outcome of its comprehensive review and the next steps for the NDA for TX-004HR

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## **Potential CRL Resolution Pathways**

- Submit the additional endometrial safety information to the NDA for TX-004HR on or before
   September 18, 2017
  - The safety data from the WHI Observational Study was published in the peer-reviewed medical journal, Menopause, on August 16, 2017
- Meeting set with the FDA November 3, 2017
  - The company expects to learn if the additional endometrial safety data submitted to the NDA for TX-004HR addresses the lack of long-term safety identified in the CRL

#### **Resubmission Pathway**

- Resubmit amended NDA
  - Establish new target action date
- If Class 1 Resubmission, approval decision within 60 days of resubmission
- If Class 2 Resubmission, approval decision within 180 days of resubmission
- 1Q18/2Q18 approval (if successful)
- Reserve the right to pursue the FDA's formal dispute resolution process if a reasonable resubmission timeline cannot be established

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## Women's Health Initiative Observational Study

- First ever study to evaluate the long-term safety of women using <u>only</u> U.S. FDA-approved vaginal estrogen products
  - 2,953 users of vaginal estrogen without progestin with an intact uterus
  - Median duration of use of 2-3 years and median duration of follow-up of 7.2 years, representing over 21,000 patient years of data
  - Risks of breast cancer, endometrial cancer, colorectal cancer, stroke, and pulmonary embolism/deep vein thrombosis were not statistically significant between vaginal estrogen users and nonusers
    - 11 total cases of endometrial cancer

Breast cancer, endometrial cancer, and cardiovascular events in participants who used vaginal estrogen in the Women's Health Initiative Observational Study

Carolyn J. Crandall, MD, MS, <sup>1</sup> Kathleen M. Hovey, MS, <sup>2</sup> Christopher A. Andrews, PhD, <sup>3</sup> Rowan T. Chlebowski, MD, PhD, <sup>4</sup> Marcia L. Stefanick, PhD, <sup>5</sup> Dorothy S. Lane, MD, MPH, <sup>6</sup> Jan Shifren, MD, <sup>7</sup> Chu Chen, PhD, <sup>8</sup> Andrew M. Kaunitz, MD, <sup>9</sup> Jane A. Cauley, DrPH, <sup>10</sup> and JoAnn E. Manson, MD, DrPH<sup>11</sup>

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# Focus on Three Main Fundamental Levers to Drive TX-004HR Launch, If Approved

#### **Drive Market Share**

#### **Targeted Market Expansion**

Differentiate TX-004HR as new treatment option that redefines relief



Elevate importance of VVA by demonstrating true impact of disease



**Market Growth Through Compliance** 



Build a differentiated national care model for successful diagnosis, treatment, and management of symptoms of VVA caused by menopause

#### **Commercial Execution**

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## Efficacy, Safety, and Positive User Experience Redefines Relief

## Perceived Shortcomings

- 1 in 4 women achieve limited relief<sup>1</sup>
- Delayed onset of efficacy<sup>1</sup>
- Hormone exposure concerns¹
- Messiness<sup>1</sup>
- Products difficult to use<sup>1</sup>
- Inadequate instructions on use<sup>1</sup>

#### TX-004HR Solution

- Early efficacy observed at week 2
- Efficacy for vaginal dryness
- Negligible systemic exposure
- No messiness
- No applicator; any time of day use
- Simple dose pack; easy instructions

Patients Choose TX-004HR

Safety/

**Side Effects** 

Convenience

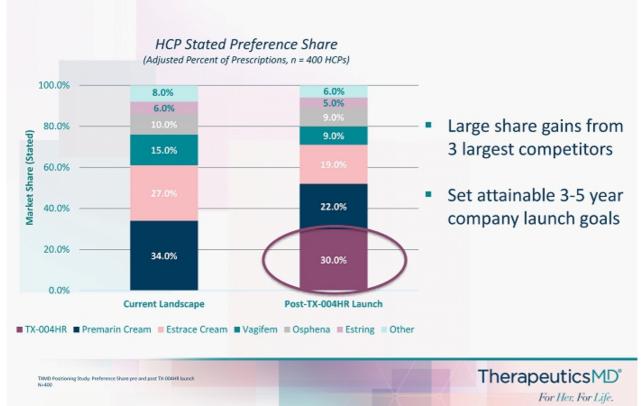
Rejoice Trial	4 mcg	10 mcg	25 mcg
Survey Results	(N=119)	(N=113)	(N=128)
TX-004HR preferred over	73.9%	67.3%	74.2%

1) Wysocki, 5 et al, Management of Voginal According Implications from the REVINE Survey. Clinical Medicine Assights: Reproductive Health 2014 823-30 doi:10.4187/CMRH.514498

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## **Foundation Already Built for a Strong Launch**

#### TXMD Sales Force Currently in OB/GYN Offices

- 40% overlap with current prenatal vitamins business
- Currently calling on VVA targets with disease awareness campaign
- Planned sales force of 100 in place prior to launch
- Partnership with inVentiv, leading contract sales organization
- Operational and analytic systems



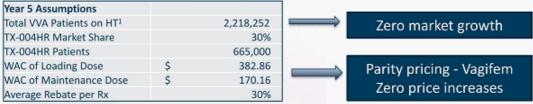
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## Increasing Compliance Through National Care Model Represents TXMD Core Competency

#### **Prenatal Vitamins Market VVA Market** Market Dynamics: Market Dynamics: No Drug Claims Clinical and physical product differentiation 9 month condition Chronic, progressive condition Industry Average Patient Compliance: Industry Average Patient Compliance: Vaginal Creams: 1.5 fills per year 2.5 fills per pregnancy Vaginal Tablets: 3.5 fills per year TXMD Compliance with National Care Model: Potential Compliance with National Care Model: 8 fills per pregnancy Greater than 4 fills per year TX-004HR Therapeutics MD° For Her. For Life.

## Compliance and Fills Per Year Drives TX-004HR Net Revenue at Year 5 of Launch





1) IMS SDI's Total Patient Tracker; Annual 2016

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## **Payers are Continuing to Provide Choice**

## 80% of Payers Prefer 2+ Products

VVA Category		Estrace Cream	Estring	Osphena	Premarin Cream	Vagifem
Payers	Lives	Univ. Status	Univ. Status	Univ. Status	Univ. Status	Univ. Status
Express Scripts PBM	28,411,137	Preferred	Covered	Covered	Preferred	Preferred
CVS Caremark RX	25,490,409	Preferred	Covered	Preferred	Preferred	Preferred
UnitedHealth Group, Inc.	15,606,808	Covered	Preferred	Covered	Covered	Preferred
Anthem, Inc.	14,307,637	Preferred	Preferred	Covered	Preferred	Covered
OptumRx	9,508,973	Covered	Covered	Covered	Preferred	Covered
Aetna, Inc.	9,255,194	Covered	Covered	Covered	Preferred	Covered
Department of Defense - TRICARE	7,004,961	Preferred	Preferred	Preferred	Preferred	Preferred
Kaiser Foundation Health Plans, Inc.	5,610,331	Preferred	Preferred	Not Covered	Preferred	Not Covered
CIGNA Health Plans, Inc.	6,375,734	Covered	Preferred	Covered	Preferred	Covered
Blue Cross Blue Shield Association Corporation	5,442,845	Preferred	Covered	Covered	Preferred	Preferred
Health Care Service Corporation	5,135,711	Preferred	Covered	Covered	Covered	Preferred
Department of Veterans Affairs (VHA)	4,803,318	Covered	Covered	Covered	Preferred	Covered
Humana, Inc.	2,325,564	Covered	Covered	Not Covered	Covered	Covered
Blue Cross Blue Shield of Michigan	2,317,410	Covered	Preferred	Covered	Preferred	Preferred
Indian Health Service (IHS)	2,201,309	Covered	Covered	Covered	Preferred	Covered
Blue Shield of California	1,894,377	Preferred	Preferred	Covered	Preferred	Preferred
Prime Therapeutics	1,885,924	Preferred	Covered	Covered	Covered	Preferred
Blue Cross and Blue Shield of Florida, Inc.	1,861,938	Covered	Covered	Covered	Preferred	Preferred
Highmark, Inc.	1,781,021	Covered	Preferred	Covered	Preferred	Covered
CareFirst, Inc.	1,530,652	Preferred	Covered	Preferred	Preferred	Preferred

MMIT Data January 2017

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## **Menopause Overview**

- Menopause represents the natural life-stage transition when women stop having periods as the production of Estrogen (E) and Progesterone (P) decreases
  - Average age of menopause 51 years<sup>1</sup>
  - Women may spend, on average, more than one-third of their lives in a hypoestrogenic state
- May result in physical and emotional symptoms<sup>1</sup>
  - Symptoms include vasomotor symptoms (hot flashes, night sweats), mood changes and vaginal dryness
  - Prolonged lack of estrogen can affect the bones, cardiovascular system, and increases risks for osteoporosis
- Long history of Estrogen (E) and Progesterone (P) use
  - Estrogen and progesterone have been used for over 50 years as treatment
  - Estrogen to reduce symptoms and other long-term conditions
  - Progesterone to prevent thickening of the uterine wall<sup>2</sup>
    - Increased risk for endometrial hyperplasia/endometrial cancer if estrogen unopposed<sup>2</sup>

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) Mational Institutes of Health, National Institute on Aging, https://www.nla.nih.gov/health/publication/menopause, last accessed November 3, 2015.
) International Journal on Women's Health, http://www.ncbi.nlm.nih.gov/pmc/articles/PWC3897322/

## **TX-001HR Product Development Rationale**

2002 Women's Health Initiative (WHI) study showed that synthetic hormones increased the risk of breast cancer, stroke, heart attack and blood clots (all FDA-approved combination hormonal products contain a synthetic Progestin and not a bio-identical Progesterone)



- Post WHI, women and healthcare providers shifted to Bio-Identical Hormone Therapy (BHRT) containing bio-identical estradiol and bio-identical progesterone as an alternative despite being unapproved drugs that are not covered by insurance
  - 90M+ scripts of synthetic hormone therapy prescribed annually before 2002, declining to ~10M in  $2015^1$ 
    - Today, patients have the choice between three second best therapies:
      - · FDA-approved, synthetic combination hormones
      - · FDA-approved, separate bio-identical hormone products
      - Unapproved, <u>compounded</u> bio-identical hormones that have not been proven safe and effective, or covered by insurance
- Compounding filled the need for BHRT



- 30M scripts (3M women) of Compounded Bio-identical Hormone Therapy (CBHRT) prescribed annually in the U.S. currently $^{2,3}$
- No FDA-approved BHRT combination product of estradiol + bio-identical progesterone
- TX-001HR would become the first and only FDA-approved bio-identical combination product to fill this unmet need

Symphony Health Solutions PHAST Data powered by IDV: Annual 2015

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The reported number of annual custom compounded hormone therapy progesteranes taken combined and in combination (26MM to 33MM)
Pinkerton, J.V. 2015. Menopause, Vol.22, No.9, pp 0-11.

## Medical Societies Discourage Prescribing of Compounded Bio-Identical Hormones

- ACOG and ASRM Committee Opinion states compounded hormones may pose additional risks compared to FDA-approved products<sup>1</sup>
  - Lack of efficacy and safety data
  - Lack of Good Manufacturing Practices (GMP)
  - Variable purity
  - Variable content uniformity
  - Variable potency (under/over dose)
  - Lack of stability
  - Unopposed E / Ineffective P leads to increased risk of endometrial hyperplasia / cancer









DO YEARS



Committee on Gynecologic Practice and the American Society for Reproductive Medicine Practice Committee, Number 532, August 2012.
 Reafformed 201A, Replace No. 357, November 2007 and No. 322, November 2005.

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## TX-001HR - Potential Best in Class Therapy



#### Potential first and only:

- 1) Bio-identical combination estradiol & progesterone
- 2) FDA-approved

#### **Dosing and Delivery**

Once-a-day single oral softgel capsule

#### **Addresses Unmet Medical Need**

- First and only combination of bio-identical estradiol and bio-identical progesterone product candidate
- Single combination dose option
- Positive Phase 3 Replenish Trial safety and efficacy results
- Potential FDA-approval with insurance coverage

Benefits to women, healthcare providers, and pharmacies

NOA to be submitted
 Reimbursement anticipated if FDA-approved

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## **Replenish Trial Co-Primary Endpoints**

	weeks 4 and	12, VMS-mITT Po	pulation		
Estradiol/Progesterone	1 mg/100 mg (n = 141)	0.5 mg/100 mg (n = 149)	0.5 mg/50 mg (n = 147)	0.25 mg/50 mg (n = 154)	Placebo (n = 135)
		Frequency			
Week 4 P-value versus placebo	<0.001	0.013	0.141	0.001	-
Week 12 P-value versus placebo	<0.001	<0.001	0.002	<0.001	-
		Severity			
Week 4 P-value versus placebo	0.031	0.005	0.401	0.1	-
Week 12 P-value versus placebo	<0.001	<0.001	0.018	0.096	-
Primary Safety Endpoint: In		us Endometrial H rial Safety Popula		alignancy up to 1	2 months,
Endometrial Hyperplasia	0% (0/280)	0% (0/303)	0% (0/306)	0% (0/274)	0% (0/92)

MITT = Modified intent to treat

<sup>T</sup>Per FDA, consensus hyperplasia refers to the concurrence of two of the three pathologists be accepted as the final diagnosis

P-value < 0.05 meets FDA guidance and supports evidence of efficacy

Primary Efficacy Analysis pre-specified with the FDA in the clinical protocol and Statistical Analysis Plan (SAP)

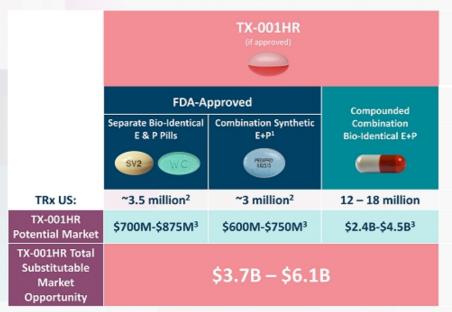
• P-value < 0.05 meets FDA guidance and supports evidence of efficacy

Replenish Trial Topline Data

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## **Multi-Billion Dollar Total Substitutable Market Opportunity**



If approved, TX-001HR can provide a single pill solution for women and physicians who:

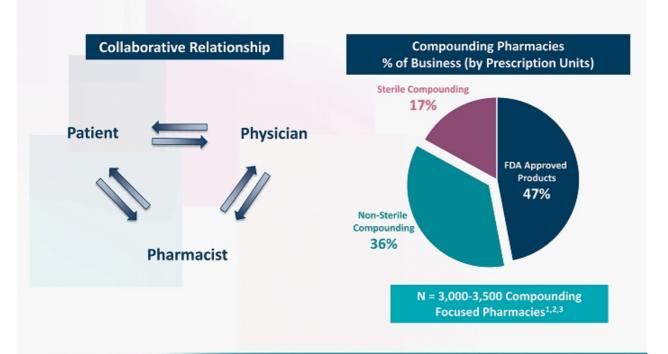
- 1) Demand an FDA-approved bio-identical combination hormone product
- 2) Do not trust compounded hormones

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Dindustes the following drugs: Active(a", FerrieRT\*, Angoliq", Generic (7)) - Progesties, Premptes, Premptese\*, Dawree\*, Brisdele\*\* 25 Samphay Health Solutions PHAST Star poweredly (DV; 12 resetts as of December 13 2015 25 Assume WAIG printing between 5010-5100 Therapeutics MD°

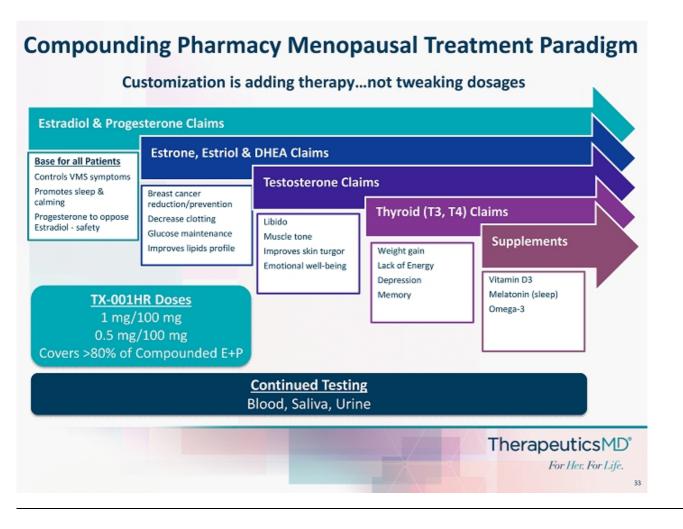
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## **Understanding the Compounding Pharmacy**



(1) 2013 National Community Pharmacists Association Digest: Financial Be (2) NCPA Community Pharmacy Compounding Survey (November 2012) (3) NPI Database: using taxonomy codes

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## **BIO-IGNITE™**

### **Compounding Pharmacy Partnership Strategy**

BIO-IGNITE™ is an outreach program to quantify the number of compounded bio-identical estradiol and progesterone prescriptions currently dispensed by the 3,000-3,500 high-volume compounding pharmacies, and qualify their interests in distributing our hormone product candidates, if approved.

#### Phase 1:

Understand and identify the high volume pharmacies and prescribers that have developed a specialty focus around women's menopausal health

#### Phase 2:

Work with these specialists to transition patients from unapproved compounded therapies to an FDA-approved treatment

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### **BIO-IGNITE™** Progress and Results Partnerships with Large Pharmacy Network and Individual Pharmacies Pharmacy Network and Combination # of Pharmacies **Individual Pharmacy Partners Bio-Identical E+P Scripts** Premier ~1,500,000 >300 Pharmacies 'alue prescriptions annually Pharmacy Compounding Network In Network >400 Pharmacies >500,000 **TXMD Outreach to** with Prescription **Individual Pharmacies** prescriptions annually Data Therapeutics MD° For Her. For Life.

## **Adverse Reimbursement and Regulatory Environments Continue to Erode Independent Pharmacy Margins**



OPTUM<sup>®</sup>

November 2013: Congress enacts Drug Quality and Security Act (DQSA), which prohibits compounding of essential copies of an FDA-approved drug except in limited circumstances such as drug shortage1



June 3, 2014: ESI launches a "Compound Management Solution," creating a list of excluded ingredients that eliminated almost 95% of all compound claims2

July 2014: Optum initiates a comprehensive compound management program, including prior authorizations and step therapy for all compounded prescriptions3



- Large fixed capital expenditure requirements, with some totaling >\$150,000 per pharmacy to implement

1) http://www.fda.gov/Drugs/DrugSafety/DrugIntegrityandSupplyChainSecurity/DrugSupplyChainSecurity/DrugSupplyChainSecurity/DrugSupplyChainSecurity/Jwww.jacprx.org/general/custom.asp?page=CCIns161314
3) http://www.opum.com.br/content/optum/en/optumrs/pharmacy-insights/restoring-trust-compoud-lates/de-audit-fies/de-audit-fies/sup\_od/ER/MT-7808.pdf
5) https://www.ascp.com/sites/defaulit/files/Joint%20USP%20letter%202015%20FINAL.pdf

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# **Economic Incentives Provide Catalyst to Switch to TX-001HR**

Independent Pharmacy Net Income Per Script with TX-001HR						
	Compounded E+P Post USP-800		TX-001HR Launch 2H18			
Revenue						
Patient Co-Pay		50.00		50.00		
Third-Party Reimbursement		-		200.00		
Total Net Revenue	\$	50.00	\$	250.00 <sup>1</sup>		
Costs of Good Sold		7.50		200.00 <sup>2</sup>		
Gross Profit	\$	42.50	\$	50.00		
Gross margin	85.0%		20.0%			
Operating Expenses						
G&A		15.00		15.00		
S&M		7.50		5.00		
Additional Compounding Costs <sup>3</sup>		15.00		-		
Cost of USP-800 Requirements <sup>4</sup>		10.00		-		
Total Operating Expenses	\$	47.50	\$	20.00		
Pre-Tax Profit	\$	(5.00)	\$	30.00		
Operating margin	-1	10.0%	12.0%			

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# **PVPCN Distribution Agreement Rationale**

#### Innovation

- Potential low-dose local estrogen therapy for VVA
- Potential first and only FDAapproved bio-identical combination of E+P
- Clinical validation of current treatment paradigm for menopausal symptoms

#### **Regulatory Environment**

- Drug Quality and Security Act
- Loss of Third-Party Reimbursement
- USP-800 Hazardous Drugs

## TXMD and PVPCN

#### **Commercial Opportunity**

- 1.5 million annual compounded E+P prescriptions directly substitutable to TX-001HR
- Improved pharmacy economics
- Maintain and grow patient and physician relationships

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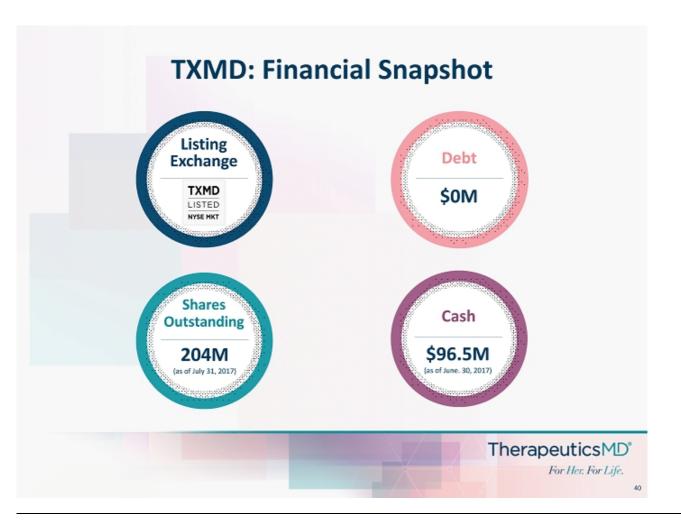
# Expect Robust Insurance Coverage For TX-001HR, If Approved, In-Line with Product Class

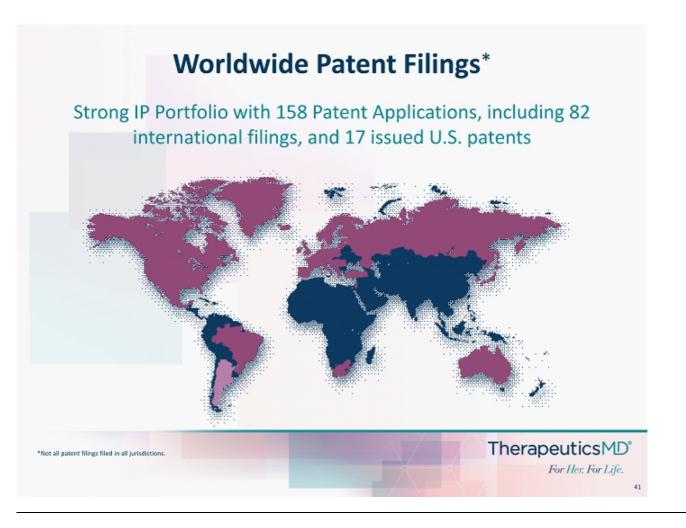
4,315 Commercial Plans	% Unrestricted Access of Commercial Plans	Not Covered	
Estrace® (Oral)	96%	1%	
Prempro®	94%	5%	
CombiPatch®	93%	4%	
Climara Pro®	92%	4%	
FemHRT®	87%	6%	
Duavee®	86%	5%	
Vivelle-Dot®	84%	5%	
Activella®	83%	8%	
Prometrium®	83%	6%	

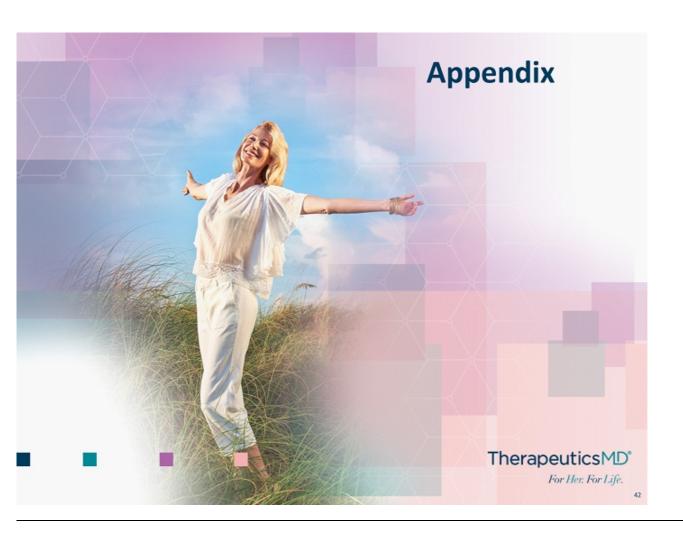
Data Source MMIT August 17, 2016 – 4,300 commercial plans All trademarks are the property of their respective owners.

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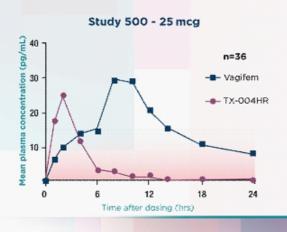


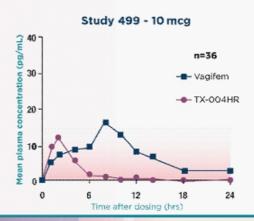


# TX-004HR vs. Vagifem<sup>o</sup> Phase 1 Single Dose PK Studies

#### **Key Findings**

- Tmax ~2 hours with TX-004HR and ~8 hours with Vagifem
- Systemic absorption of estradiol AUC (0-24 hours) is 2- to 3-fold lower with TX-004HR relative to Vagifem





Vagifem is a registered trademark of Novo Nordisk A/S Corp. Pickar, et al. *Climacteric* 2016 Therapeutics MD°

## FDA-Approved Separate Bio-Identical E & P Substitutable Market Opportunity

Healthcare providers not comfortable with compounding will often prescribe two separate
 FDA-approved bio-identical products to treat menopausal symptoms







Product Use by Age	AGES 41-50	AGES 51-60	AGES 61-70	AGES 71+	TRx Totals
Progesterone*	528,325	1,326,618	1,060,666	678,775	3,594,384 <sup>1</sup>
Estradiol	2,677,210	5,494,846	2,826,636	1,083,726	12,082,418 <sup>1</sup>

<sup>\*</sup>Menopausal use of progesterone directly substitutable to TX-001HR

~3.5M Potential Prescriptions for TX-001HR (if approved)

Market Opportunity = \$700M-875M<sup>2</sup>

- This regimen carries <u>significant risk</u> of endometrial hyperplasia/cancer if the patient is noncompliant with regular progesterone use
  - Side effects of progesterone including nausea and somnolence can lead to a patient not taking the progesterone
  - Results in two separate co-pays for the patient

1] Symphony Health Solutions PHAST Data powered by IDV; 12 months as of December 31 2015 2] Assume WAC pricing between \$200-250

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# FDA-Approved Combination Synthetic E+P **Substitutable Market Opportunity**

## FDA-Approved Combination Synthetic E+P Prescriptions by Age





AGES	AGES	AGES	AGES	AGES	Unknown	TRx
31-40	41-50	51-60	61-70	71+	Ages	Totals
52,575	372,968	1,712,852	759,634	151,821	68,672	3,118,522 <sup>1</sup>

~3M Potential Prescriptions for TX-001HR (if approved) Market Opportunity = \$600M-750M<sup>2</sup>

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