**Slide 1**

 **Drug Formulary Commission**

**Bureau of Health Care Safety and Quality**

**Department of Public Health**

**May 5, 2016**

* Drug Formulary Commission Statutory Mission

**Opening Remarks**

* Schedule II and III Opioid Universe
* Component 1: Drugs Of Heightened Public Health Risk
* Component 2: Drug Formulary Therapeutic Substitutes With Abuse Deterrent Properties
* Component 3: “Cross Walk”

**Slide 2**

Draft Formulary

* Review of April 7th meeting
* Crosswalk
	+ Embeda
* Next Steps

**Slide 3**

 Presentation Agenda

**Slide 4**

**Crosswalk**

**Slide 5**



**List A: Generic Drug Products with a Heightened Public Health Risk**

LIST A - Generic



**Slide 6**

List B: Drug Products

Advanced to Component 3

as Potential Substitutes

LIST B

… In considering whether a drug is a **chemically equivalent substitution** the commission shall consider:

* the **accessibility** of the drug and its proposed substitute;
* whether the drug's substitute is **cost** prohibitive;
* the **effectiveness** of the substitution (FDA approved for pain); and
* whether, based upon the current patterns of abuse and misuse, the drug's substitute incorporates abuse deterrent technology that will be an **effective deterrent** to such abuse and misuse.

**Slide 7**

 Drug Product Criteria

**Cost Impact Methods**

**Slide 8**

* Utilization data (units dispensed) was collected from the PMP for 2015 for all Schedule II and III opioids.
* Total milligrams dispensed was calculated for each drug product (multiply units dispensed by strength for each strength, add results for each strength per product).
* Total cost of each drug product was calculated for 2015 (multiply units dispensed by WAC per strength, add results for each strength per product).
* Approximate cost per milligram was calculated for each drug product, in aggregate (divide total cost by total milligrams dispensed for each product).
* Cost of substitution was calculated by subtracting approximate cost per milligram of List A product (in aggregate) from approximate cost per milligram of Embeda® (in aggregate), then multiplying difference by units dispensed of the List A product in 2015.

**Cost Impact Methods**

**Slide 9**

* Results were provided ranging from 50% to 75% to 100% substitution, and results were also expressed as a percentage increase or decrease in cost.
* Tables on the following slides show exact matches in terms of milligram strengths between List A morphine extended-release products and Embeda®; however, many other combinations exist that contain equivalent amounts of morphine per day and are potentially substitutable.
* Cost Impact calculations are based upon milligrams dispensed in attempt to capture cost of substitution for each product that is inclusive of all potential substitutions containing the same amount of morphine per day.
* Approximate patient impact is extracted from 2015 PMP data.

“Chemically Equivalent Substitution”, for the purpose of creating a formulary of drugs with abuse deterrent properties that the commission has determined may be appropriately substituted for opioids that have been determined to have a heightened public health risk due to the drugs’ potential for abuse and misuse, shall mean drug products which contain the same active ingredients, and are equivalent in strength or concentration, dosage form, and route of administration, and produce a comparable biologic effect. Prodrugs or ingredients without analgesic effect that are used solely for abuse deterrent formulations need not be equivalent.

**Slide 10**

 Chemically Equivalent Substitution

**Single-Dose Pharmacokinetic Data**

**Slide 11**

CV=coefficient of variation, ER=extended-release Yellow=List A

\*Values represent median (range) Green=List B

†CV not reported

NDA/ANDA Data Source:

Drugs@FDA [database on the Internet]. Rockville (MD): Food and Drug Administration (US), Center for Drug Evaluation and Research; 2016 [cited 2016 Apr 15]. Available from: <http://www.accessdata.fda.gov/scripts/cder/drugsatfda/index.cfm>.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Drug** | **Dose** | **Peak Concentration (Cmax, mean [CV%])** | **Time to Peak Concentration (tmax, mean [CV%])** | **Elimination Half-Life (t1/2, mean [CV%])** | **Area Under the Curve (AUC0-∞, mean [CV%])** |
| Avinza® (morphine ER 24 hour capsule) | 60 mg | 7.2 (45.80%) ng/mL | 11.1 (68.47%) hours | 21.8 (42.66%) hours | 261.9 (31.08%) ng • hr/mL |
| Embeda® (morphine ER and naltrexone) | 100 mg/4 mg | 12.31 (25.30%) ng/mL | 7.5 (2.50 to 18.00) hours\* | 28.8 (39.90%) hours | 384.01 (25.30%) ng • hr/mL |
| Kadian® (morphine ER 12 or 24 hour capsule) | 100 mg | 13.19 (45.70%) ng/mL | 10 (6.00 to 24.00) hours\* | 33.83 (34.60%) hours | 390.98 (25.8%) ng • hr/mL |
| Morphine ER tablet | 100 mg | 39.3 (42%) ng/mL | 2.6 hours† | Not reported | 401.6 (31%) ng • hr/mL  |

**Embeda**

**Slide 12**

\*Wholesale acquisition cost per Online Red Book as of 3/15/2016

ADP=abuse-deterrent property, Q12H=every 12 hours, Q24H=every 24 hours

Cost of Substitution (100% Conversion): -$110,097 (Cost Avoidance)

Cost of Substitution (75% Conversion): -$82,573 (Cost Avoidance)

Cost of Substitution (50% Conversion): -$55,048 (Cost Avoidance)

Percent Change in Cost: -13.34% Decrease in Cost

Possible Patient Impact: Approximately 90 Patients

**Embeda® and Morphine Extended-Release 24 Hour Capsule**

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Medication** | **Active Ingredient** | **Strengths** | **Dosage Form** | **Route of Administration** | **Dosing Schedule** | **Cost/unit\*** | **Units Dispensed 2015** | **Approximate Cost 2015** | **ADP Efficacy** |
| Embeda® | morphine sulfate and naltrexone | 30 mg/1.2 mg | extended-release capsule | Oral | Q12H or Q24H | $8.93 | 5,601 | $50,017 | Category II |
| 60 mg/2.4 mg | $14.08 | 2,354 | $33,144 |
| Morphine extended-release 24 hour | morphine sulfate | 30 mg | extended-release capsule | Oral | Q24H | $4.58 | 8,103 | $37,112 | N/A |
| 60 mg | $8.90 | 9,783 | $87,069 |

**Embeda**

**Embeda® and Kadian®**

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Medication** | **Active Ingredient** | **Strengths** | **Dosage Form** | **Route of Administration** | **Dosing Schedule** | **Cost/unit\*** | **Units Dispensed 2015** | **Approximate Cost 2015** | **ADP Efficacy** |
| Embeda® | morphine sulfate and naltrexone | 20 mg/0.8 mg | extended-release capsule | Oral | Q12H or Q24H | $5.95 | 6,248 | $37,176  | Category II |
| 30 mg/1.2 mg | $8.93 | 5,601 | $50,017  |
| 50 mg/2 mg | $11.74 | 2,675 | $31,405  |
| 60 mg/2.4 mg | $14.08 | 2,354 | $33,144  |
| 80 mg/3.2 mg | $18.78 | 598 | $11,230  |
| 100 mg/4 mg | $23.48 | 742 | $17,422  |
| Kadian® | morphine sulfate | 20 mg | extended-release capsule | Oral | Q12H or Q24H | $8.15 | 6,034 | $49,177  | N/A |
| 30 mg | $8.87 | 2,378 | $21,093  |
| 50 mg | $14.83 | 1,596 | $23,669  |
| 60 mg | $17.74 | 19,490 | $345,753  |
| 80 mg | $23.63 | 1,046 | $24,717  |
| 100 mg | $29.16 | 10,010 | $291,892  |

Cost of Substitution (100% Conversion): -$110,097 (Cost Avoidance)

Cost of Substitution (75% Conversion): -$82,573 (Cost Avoidance)

Cost of Substitution (50% Conversion): -$55,048 (Cost Avoidance)

Percent Change in Cost: -13.34% Decrease in Cost

Possible Patient Impact: Approximately 90 Patients

\*Wholesale acquisition cost per Online Red Book as of 3/15/2016

ADP=abuse-deterrent property, Q12H=every 12 hours, Q24H=every 24 hours

**Slide 13**

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Medication** | **Active Ingredient** | **Strengths** | **Dosage Form** | **Route of Administration** | **Dosing Schedule** | **Cost/unit\*** | **Units Dispensed 2015** | **Approximate Cost 2015** | **ADP Efficacy** |
| Embeda® | morphine sulfate and naltrexone | 20 mg/0.8 mg | extended-release capsule | Oral | Q12H or Q24H | $5.95 | 6,248 | $37,176  | Category II |
| 30 mg/1.2 mg | $8.93 | 5,601 | $50,017  |
| 50 mg/2 mg | $11.74 | 2,675 | $31,405  |
| 60 mg/2.4 mg | $14.08 | 2,354 | $33,144  |
| 80 mg/3.2 mg | $18.78 | 598 | $11,230  |
| 100 mg/4 mg | $23.48 | 742 | $17,422  |
| Morphine extended-release 12 or 24 hour | morphine sulfate | 20 mg | extended-release capsule | Oral | Q12H or Q24H | $4.18 | 48,677 | $203,470  | N/A |
| 30 mg | $4.55 | 40,811 | $185,690  |
| 50 mg | $7.60 | 27,077 | $205,785  |
| 60 mg | $9.10 | 22,246 | $202,439  |
| 80 mg | $12.12 | 8,318 | $100,814  |
| 100 mg | $15.21 | 28,226 | $429,317  |

Cost of Substitution (100% Conversion): $834,370

Cost of Substitution (75% Conversion): $625,777

Cost of Substitution (50% Conversion): $417,185

Percent Change in Cost: 58.90% Increase in Cost

Possible Patient Impact: Approximately 761 Patients

\*Wholesale acquisition cost per Online Red Book as of 3/15/2016

ADP=abuse-deterrent property, Q12H=every 12 hours, Q24H=every 24 hours

**Embeda**

**Slide 14**

**Embeda® and Morphine Extended-Release 12 or 24 Hour Capsule**

**Embeda® and MS Contin®**

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Medication** | **Active Ingredient** | **Strengths** | **Dosage Form** | **Route of Administration** | **Dosing Schedule** | **Cost/unit\*** | **Units Dispensed 2015** | **Approximate Cost 2015** | **ADP Efficacy** |
| Embeda® | morphine sulfate and naltrexone | 30 mg/1.2 mg | extended-release capsule | Oral | Q12H or Q24H | $8.93 | 5,601 | $50,017  | Category II |
| 60 mg/2.4 mg | $14.08 | 2,354 | $33,144  |
| 100 mg/4 mg | $23.48 | 742 | $17,422  |
| MS Contin®  | morphine sulfate | 30 mg | extended-release tablet | Oral | Q12H or Q8H | $5.77 | 11,153 | $64,353  | N/A |
| 60 mg | $11.27 | 18,616 | $209,802  |
| 100 mg | $16.68 | 16,650 | $277,722  |

**Embeda**

**Slide 15**

\*Wholesale acquisition cost per Online Red Book as of 3/15/2016

ADP=abuse-deterrent property, Q8H=every 8 hours, Q12H=every 12 hours, Q24H=every 24 hours

Cost of Substitution (100% Conversion): $274,652

Cost of Substitution (75% Conversion): $205,989

Cost of Substitution (50% Conversion): $137,326

Percent Change in Cost: 46.71% Increase in Cost

Possible Patient Impact: Approximately 101 Patients

**Embeda® and Morphine Extended-Release Tablet**

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Medication** | **Active Ingredient** | **Strengths** | **Dosage Form** | **Route of Administration** | **Dosing Schedule** | **Cost/unit\*** | **Units Dispensed 2015** | **Approximate Cost 2015** | **ADP Efficacy** |
| Embeda® | morphine sulfate and naltrexone | 30 mg/1.2 mg | extended-release capsule**Embeda****Slide 16**\*Wholesale acquisition cost per Online Red Book as of 3/15/2016ADP=abuse-deterrent property, Q8H=every 8 hours, Q12H=every 12 hours, Q24H=every 24 hoursCost of Substitution (100% Conversion): $65,593,974 Cost of Substitution (75% Conversion): $49,195,480Cost of Substitution (50% Conversion): $32,796,987Percent Change in Cost: 610.70% Increase in CostPossible Patient Impact: Approximately 27,109 Patients | Oral | Q12H or Q24H | $8.93 | 5,601 | $50,017  | Category II |
| 60 mg/2.4 mg | $14.08 | 2,354 | $33,144  |
| 100 mg/4 mg | $23.48 | 742 | $17,422  |
| Morphine extended-release  | morphine sulfate | 30 mg | extended-release tablet | Oral | Q12H or Q8H | $1.14 | 2,955,878 | $3,369,701  | N/A |
| 60 mg | $2.23 | 1,469,363 | $3,276,679  |
| 100 mg | $3.29 | 571,850 | $1,881,387  |

**Embeda® and All List A Morphine Extended-Release Products**

**Embeda**

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Medication** | **Active Ingredient** | **Strengths** | **Dosage Form** | **Route of Administration** | **Dosing Schedule** | **Cost/unit\*** | **Units Dispensed 2015** | **Approximate Cost 2015** | **ADP Efficacy** |
| Embeda® | morphine sulfate and naltrexone | 20 mg/0.8 mg | extended-release capsule | Oral | Q12H or Q24H | $5.95 | 6,248 | $37,176  | Category II |
| 30 mg/1.2 mg | $8.93 | 5,601 | $50,017  |
| 50 mg/2 mg | $11.74 | 2,675 | $31,405  |
| 60 mg/2.4 mg | $14.08 | 2,354 | $33,144  |
| 80 mg/3.2 mg | $18.78 | 598 | $11,230  |
| 100 mg/4 mg | $23.48 | 742 | $17,422  |
| Morphine extended-release 24 hour | morphine sulfate | 30 mg | extended-release capsule | Oral | Q24H | $4.58 | 8,103 | $37,112 | N/A |
| 60 mg | $8.90 | 9,783 | $87,069 |
| Kadian® | morphine sulfate | 20 mg | extended-release capsule | Oral | Q12H or Q24H | $8.15 | 6,034 | $49,177  | N/A |
| 30 mg | $8.87 | 2,378 | $21,093  |
| 50 mg | $14.83 | 1,596 | $23,669  |
| 60 mg | $17.74 | 19,490 | $345,753  |
| 80 mg | $23.63 | 1,046 | $24,717  |
| 100 mg | $29.16 | 10,010 | $291,892  |
| Morphine extended-release 12 or 24 hour | morphine sulfate | 20 mg | extended-release capsule | Oral | Q12H or Q24H | $4.18 | 48,677 | $203,470  | N/A |
| 30 mg | $4.55 | 40,811 | $185,690  |
| 50 mg | $7.60 | 27,077 | $205,785  |
| 60 mg | $9.10 | 22,246 | $202,439  |
| 80 mg | $12.12 | 8,318 | $100,814  |
| 100 mg | $15.21 | 28,226 | $429,317  |
| MS Contin®  | morphine sulfate | 30 mg | extended-release tablet | Oral | Q12H or Q8H | $5.77 | 11,153 | $64,353  | N/A |
| 60 mg | $11.27 | 18,616 | $209,802  |
| 100 mg | $16.68 | 16,650 | $277,722  |
| Morphine extended-release  | morphine sulfate | 30 mg | extended-release tablet | Oral | Q12H or Q8H | $1.14 | 2,955,878 | $3,369,701  | N/A |
| 60 mg | $2.23 | 1,469,363 | $3,276,679  |
| 100 mg | $3.29 | 571,850 | $1,881,387  |

**Slide 17**

\*Wholesale acquisition cost per Online Red Book as of 3/15/2016 Yellow=List A

ADP=abuse-deterrent property, Q8H=every 8 hours, Q12H=every 12 hours, Q24H=every 24 hours Green=List B

**Slide 17**

\*Wholesale acquisition cost per Online Red Book as of 3/15/2016 Yellow=List A

ADP=abuse-deterrent property, Q8H=every 8 hours, Q12H=every 12 hours, Q24H=every 24 hours Green=List B

**Embeda**

**Slide 18**

**Embeda® and All List A Morphine Extended-Release Products - Continued**

Overall Cost of Substitution (100% Conversion): $66,952,954

Overall Cost of Substitution (75% Conversion): $50,214,745

Overall Cost of Substitution (50% Conversion): $33,476,497

Overall Percent Change: 478.02% Increase in Cost

Overall Possible Patient Impact: Approximately 28,239 Patients

**Meeting Summary**

* Meeting Recap
* Review of takeaways
* Next Steps
	+ Crosswalk of Oxaydo
	+ Reconsideration of Zohydro
	+ Crosswalk of Hysingla
	+ List of FDA-approved non-opioid pain management alternatives with a lesser potential for abuse than Schedule II or III opioids.
* Future Meetings

**Slide 19**