



DB-Biotech Research

■ Do you have anonymous questions or comments for the call? E-mail them to: robyn.karnauskas@db.com.

Thinking Long Term – Bydureon a likely Blockbuster – Initiating w/ Buy & \$27 TP

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Passion to Perform

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We are taking a longer term view: we see value in Bydureon



We approached our research on Amylin as skeptics... but came away with conviction:

- Due diligence on approvability of Bydureon
- Due diligence on the growth in the diabetes market/treatment trends (spoke with providers, read primary research, CDC documents)
- 100 physician PCP survey (PCP's prescribe 50% of GLP-1s)
- Spoke to numerous endocrinologists for color on trends in glp use
- Deep-dive into Amylin cost structure (COGS, SGA, R&D)
- Analysis of the FUTURE competitive landscape for the GLP class
- Ran sensitivities around Amylin valuation with different Bydureon & GLP market assumptions
- M&A analysis around Amylin



Structure of this conference call

- PM Summary of our fundamental long-term thesis for Amylin
- What do the technicals say about Amylin shares?
- Why do we think Bydureon will get approved (analysis of FDA documents)?
- What is the likely label?
- How we arrive at our \$3B in peak sales for Bydureon in 2020?
 - Results from our 100 physician PCP survey
 - Takeaways from conversations with endocrinologists
 - Our view on Victoza IMS script data and GLP class read-across
 - Our analysis of how Bydureon will stack up to future competitors
 - Why do we think Bydureon will take majority share of GLP class
- Sensitivities around Bydureon & GLP-1 class peak sales
- Stock reaction post-approval: why street may be underestimating COGS
- Why is Amylin a likely acquisition target?
 - Our analysis of value of Amylin under M&A
 - Likely M&A suitors
- Conclusions



PM Summary

Amylin (AMLN) – Diabetes company

- Rating: Buy
- Price target: \$27



Two marketed products in diabetes:

- Byetta (partnered with Lilly): sold \$668M in 2009, \$557M projected in 2010
- Byetta is a twice a day drug for diabetes in GLP-1 class
- In 2010, it has faced competition from Victoza-Novo Nordisk's 1/day GLP-1
- Symlin: small product we project to sell \$88M in 2010

Key controversy:

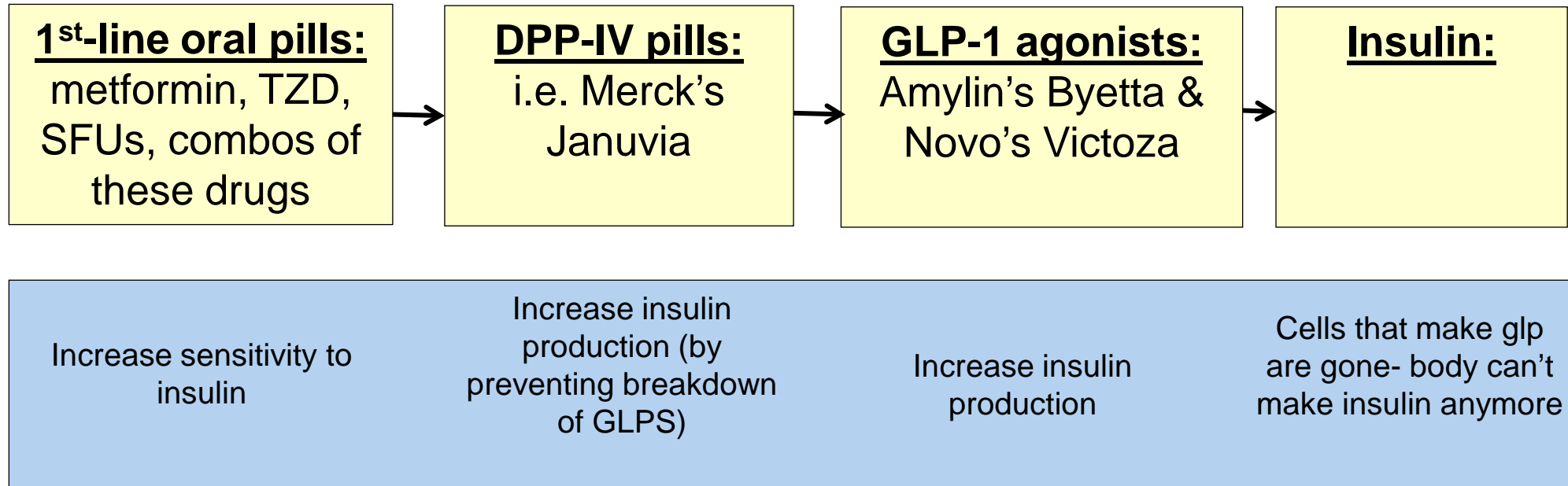
- Amylin has developed a once a week version of Byetta called "Bydureon"
- PDUFA date for Bydureon is October 22nd.
- We believe Bydureon will likely be approved, and believe the street also expects approval

KEY CONTROVERSY: HOW BIG WILL BYDUREON BE?

BYDUREON HAS TO SELL \$2B at peak to support current share price (~\$21)

Type-2 Diabetes- Quick overview

- Rating: Buy
- Price target: \$27



22M people in the US have type-2 diabetes:

- Type-2 diabetes patients can still make insulin (unlike Type-1)
- This population has been growing at 4-6%
- There are ~13.6M *treated* type-2 diabetes patients in the US alone
- **Currently ~2.5% of treated type-2 patients are on GLP-1s**

Bydureon: Quick overview

- Rating: Buy
- Price target: \$27



Once a week injection:

- Better glucose control
- Weight loss
- Better efficacy/safety than other drugs in it's class

| | Byetta (exenatide twice daily) | Victoza (liraglutide) | Bydureon (exenatide once weekly) |
|-------------------------------|---|---|--|
| Δ in HbA1c (%) | -0.7 to -0.9 | -0.8 to -1.5 | -1.5 to -1.9 |
| Weight loss (lbs) | -3.3 to -6.4 | -0.2 to -7.1 | -5.1 to -8.2 |
| % of patients with HbA1c < 7% | 31% - 53% | 42% - 54% | 60% - 77% |
| Dose | 5 mcg twice-daily. 1 hr prior to morning & evening meals. Increase to 10 mcg after 1 month. | Initial dose 0.6 mg/day for 1 wk followed by increase to 1.2 mg and 1.8 mg. Independent of meals. | 2.0 mg once weekly subcutaneous injection |
| Administration route | Subcutaneous via prefilled pen | Subcutaneous via pre-filled multi-dose pens | Syringe & vial. Needs to be reconstituted. Pen in 2012/2013. |
| Needle gauge | 29-31 | 29 | 23 (larger vs. Victoza & Byetta) |
| Nausea | 39% - 51% | 11% - 40% | 14 - 26% |

Source: Amylin, Deutsche bank research

Amylin (AMLN): Investment thesis (1)

- Rating: Buy
- Price target: \$27



#1: We believe Bydureon will likely be approved by October 22nd

- Mid-March the Amylin received a complete response letter for Bydureon
- Letter did not request any new clinical trials.
- focused on clarification of Amylin's proprietary manufacturing processes, finalizing label, and REMS

#2: We believe the GLP class will grow from 2.5% to 5% of the diabetes market

- We see market growth of 3.5% CAGR, diagnosed & treatment increases
- We believe the GLP-1 market share increases from 2%-3% to 5% in 2020

#3: We believe Bydureon to be a \$1.4B drug by 2014 and a \$3B at peak (2020)

- We expect Bydureon is priced at the average of both Victoza doses (~\$3600/year)
- Our analysis suggests that Bydureon peak market reaches ~50%

#4: Bydureon's cost structure make's Amylin a likely acquisition target

- Amylin has been mentioned repeatedly in the press as a potential take out target.
- More recently acquirers are waiting post- approval to make acquisitions.
- We see fair valuation at \$43-\$44/share under an M&A scenario

Amylin (AMLN): Investment thesis (2)

- Rating: Buy
- Price target: \$27



How our thesis is differentiated/what research supports our thesis:

1. We think investors may be underestimating the impact [diabetes market growth](#) alone has on Bydureon's potential
2. Our [conversations with endocrinologists](#) suggest there is a bolus of patients waiting for GLP-1 agonists
3. We think investors underestimate [how little the GLP-1 agonist class has to grow](#) to get at least a 20% return on Amylin shares.
4. Our [proprietary 100 physician PCP survey](#) suggests the launch will occur quicker than the street models (PCPs expect glp use to triple and Bydureon to take >50% share of the GLP market).
5. Under an M&A analysis, Bydureon's economic structure makes it [unusually appealing to an acquirer](#) in our view

Amylin (AMLN) – Valuation & Sensitivites



We created four scenarios:

- Rating: Buy
- Price target: \$27

- We use DCF analysis for our valuation.
- All assume a 2% terminal value (that is the rate we expect cash flows to continue to grow at after 2020 with a low generic risk)
- All assume 12.2% discount rate (in line with WACC)
- Our target price is based on a probability-adjusted DCF of these scenarios

| | DCF Value | Scenario Description | Proability Assigned | Weighted DCF Value |
|------------|-----------|-----------------------------|---------------------|--------------------|
| Super Bear | \$6.87 | GLP-1 Gains No Market Share | 5% | \$0.34 |
| Bear Case | \$18.24 | GLP-1 Share: 2.5% to 4% | 15% | \$2.74 |
| BASE CASE | \$27.45 | GLP-1 Share: 2.5% to 5% | 70% | \$19.21 |
| Super Bull | \$44.72 | GLP-1 Share: 2.5% to 7.5% | 10% | \$4.47 |
| | | TOTAL | 100% | \$26.77 |

Risks:

- Poor Bydureon launch
- Failure of the FDA to approve Bydureon
- Bydureon has unforseen safety signal post launch.

Source: Deutsche bank research



Before we get to the fundamentals- what can we learn from the technicals?

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What the technicals say: CONCLUSIONS

■ What is the long-term view?

- Long-term upside potential is \$30+ as a measure in months

■ What is the near-term view?

- Near-term resistance is seen – upper boundary of channel ~\$24/share
- Once a near-term high has been set, there is downside correction potential into the \$18-19 area as measured in weeks or perhaps a few months.
- Down-side support is seen at \$20.6 and \$19/share

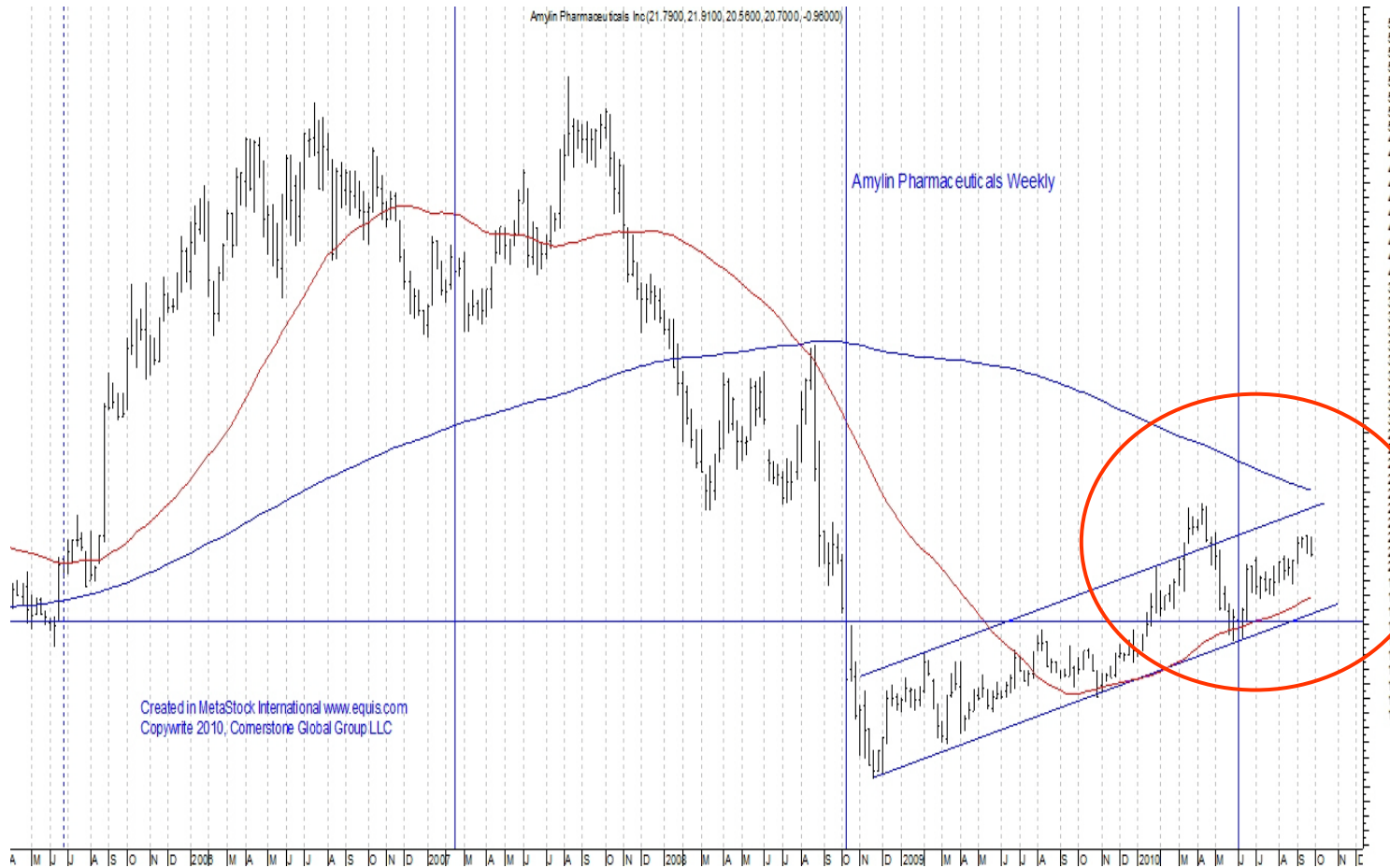
■ What else can we learn from technicals?

- A breakthrough below \$18 would be concerning- suggest more downside

- **Conclusion: Technicals support the fundamentals → long-term upside is possible.** Technicals, suggest near-term upside of \$24, followed by possible downside to ~\$19. Long-term (months) technicals suggest upside potential of \$30+



Why is a fundamental analyst incorporating technicals...we believe this is an additional tool for investors..



Channel suggest near-term support \$24/share, with near-term downside support following ~\$19/share.

Long-term trend indicates -bullish: \$30/share

Source: Cornerstone Global Group, LLC



Why we think Bydureon will be approved by Oct 22nd & our Thoughts on the likely label

We Expect Bydureon Approval by Oct 22 PDUFA



Why?:

- In March 2010, Amylin received a complete response letter
- Bydureon CR letter appears to be benign
- Approval of Victoza & Byetta monotherapy de-risk Bydureon
- Bydureon is a line-extension of Byetta (on market for several years)
- FDA made positive comments towards future longer acting GLP-1s during its review of Victoza

Benign CR Letter – FDA Would Have Said Something



#1: Requirements in the Bydureon CR Letter were benign:

- No need for new clinical or pre-clinical trials.
- Clarification of Amylin's proprietary manufacturing processes.
- Finalization of Bydureon REMS and product label
 - Victoza and Byetta monotherapy approval should provide guardrails
- No requests on 483 observations made on Ohio plant in Dec '09.
 - These have been addressed.
- Required to submit SAFETY data from all DURATION studies.



#2: The FDA held a panel in April 2009 on GLPs, still approved Victoza

- This panel highlighted safety risks with the GLP-1 class
- Safety issues included pancreatitis & risk of thyroid cancer in rodents.
- This panel was held *ahead* of Victoza's approval.
- Ultimately, the FDA did approve Victoza
 - We think this signals that the FDA is comfortable with the safety of the GLP class including Bydureon.



#3. FDA approved Victoza, despite pre-clinical data on Thyroid cancer

- The FDA made available notes from the review of Victoza's application & a commentary was published in the NEJM on March 4, 2010.
- The FDA was concerned with thyroid cancer
- As a reminder, pre-clinical studies had shown an increase in benign C-cell adenomas at Victoza doses that resulted in plasma drug levels similar to those seen in humans at approved doses.
- In an effort to see if there was a link between GLPs and cancer, the FDA asked Novo Nordisk to submit data on calcitonin (a thyroid hormone that is a marker for cancer).
- Novo Nordisk submitted 2 years of data
- Data showed that calcitonin levels remained in the normal range, although there was a slight increase in the Victoza arms.
- **The FDA found the data sufficed & approved Victoza with a black box for risk of thyroid cancer because it could not rule out the risk**
 - **We think this signals that the FDA is comfortable with the safety of the GLP class including Bydureon.**

Approval of Victoza & Byetta Mono De-risk Bydureon (3)



#4. Comments by FDA in Victoza review documents give us added comfort

- FDA reviewers acknowledged that the major advantages of Victoza were that it requires half the frequency of dosing as Byetta & has better efficacy.
 - We believe the FDA acknowledges here the value of longer acting GLP-1 agonists, which bodes well for Bydureon approval
- In addition, the FDA noted that according to its internal database they believe the preclinical findings found with Victoza are not unique to it, but it is likely also to be found with even longer acting GLP-1 agonists
 - As Victoza was still approved, despite this comment, we believe this signals that the FDA is comfortable with the safety of the GLP class including Bydureon.
- FDA reviewers were concerned with pancreatitis risk but noted that even if they make the direct link of pancreatitis to GLP-1 agonists it was likely they would not remove GLP-1 agonists from the market
 - We believe this bodes well for Bydureon approval

FDA believes most diabetes drugs have safety risk, but are needed as diabetes is a progressive disease



#6. Reviewers highlight all diabetes drugs have safety risks

- SFU- are labled for increased cardiovascular mortality & may be related to hepatotoxicity
- GSK's Avandia may be linked to cardiovascular risks & pioglitazone (marketed as Actos by Takeda) may have a link to bladder cancer and then lead to heart failure
- Insulin may be associated with cardiovascular events and may be a growth factor for cancer
- Lastly, the FDA noted that metformin appears to lack major safety concerns, but as beta cell function declines other therapies are needed.
 - We believe the FDA acknowledges other diabetes drugs on the market have their own safety concerns, which appear to be worse than Bydureon's safety profile. Plus- the FDA acknowledges the need for drugs to treat diabetes.

What we think the likely label will look like:



Likely label:

- We think there will likely be a black box for thyroid cancer risk (with more favorable language vs. Victoza label)
- We expect a warning for pancreatitis
- Second-line indication.
 - We expect a similar label to that of Victoza. This black box has not impacted Victoza sales (preclinical data may not be relevant to humans)

Why there could be upside:

- The FDA still has not added a warning to Byetta label for thyroid cancer
- In pre-clinical studies with Bydureon, thyroid cancer was not seen until at 25x-30x the human dose.
 - If there is no black box for thyroid cancer or if Bydureon is approved for first-line, there could be upside to our estimates.



How we arrive at our \$3B in peak sales for
Bydureon in 2020?

#1 Survey of 100 PCPs Indicates Bydureon is a likely Blockbuster

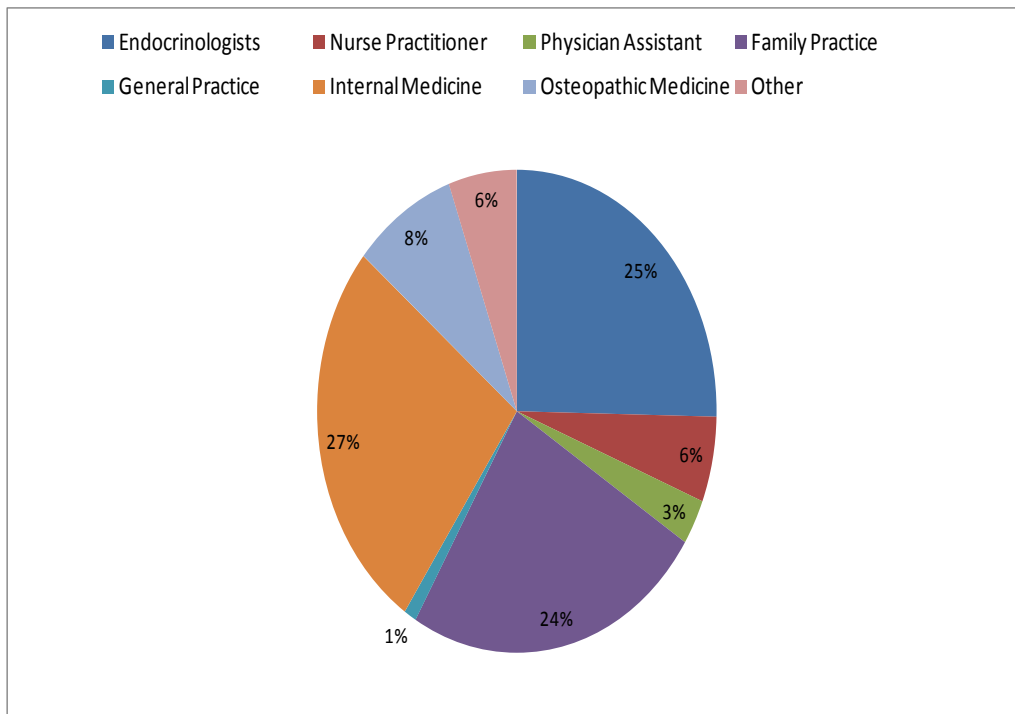
Surveyed 100 PCPs to better understand GLP-1 market



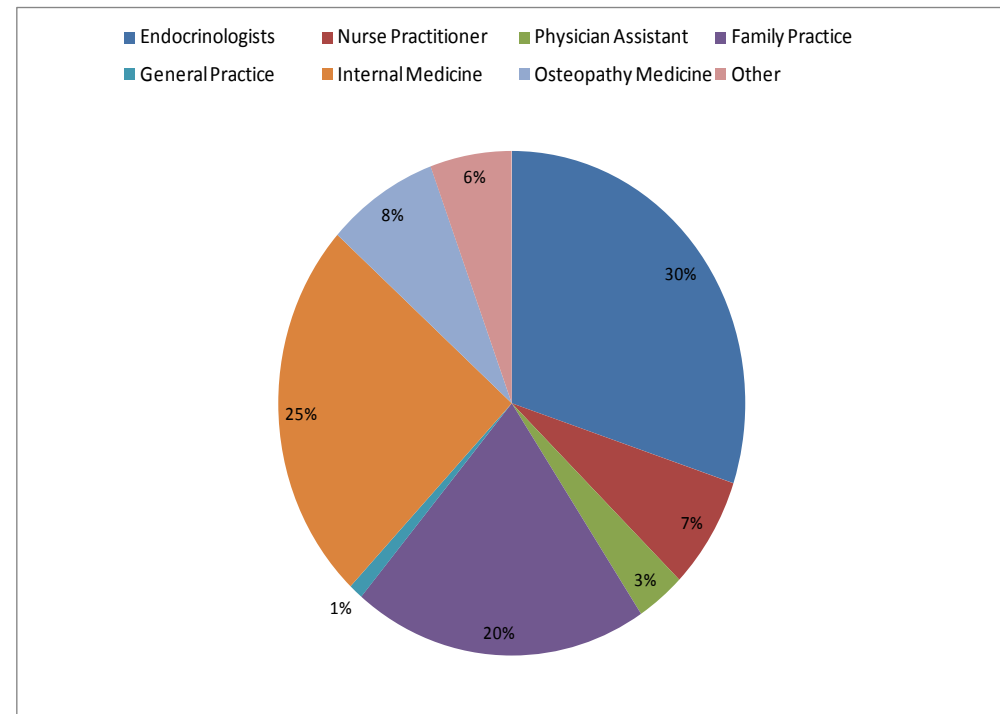
Survey only included internist and family practice physicians

- This group makes up 51% of Byetta and 45% of Victoza TRx
- Hence, it is important to understand their sentiment
- We held conversations w/ endos separately. Make up 25% of TRx.

BYETTA



VICTOZA



Surveyed 100 PCPs to better understand GLP-1 market



Survey Inclusion Criteria

- We wanted community physicians
- Did not want thought leaders
- We believe community physicians DRIVE diabetes market
- Asked them 20 questions

| Inclusion Criteria | Result of Recruiting |
|---|--|
| Physician specialty must be internal medicine or family practice | 42% Internist, 58% Family Physicians |
| Physician must have between 2-35 years of practice experience (post residency/fellowship) | Avg years of practice = 19.1 years |
| Physician must treat >50 type 2 diabetes patients with medicine (no diet and exercise) | Avg patients treated/month = 124.7 patients |
| Physician was not allowed to have participated in a market research study on diabetes within the past 3 month | 0% participated in survey w/in 3 months, 17% participated 3-6 months ago, 69% participated > 6 months ago & 14% never participated in a survey |
| Physician was not allowed to be employed by or a consultant for any pharmaceutical manufacturer, medical device company, regulatory body or market research company | 0% of physicians were employed or consulted |

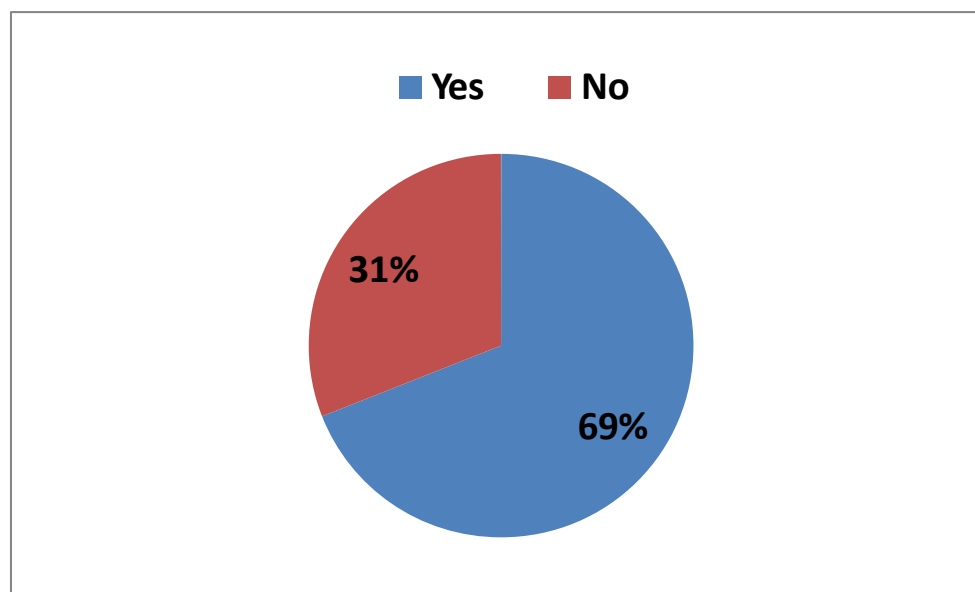
Source: Deutsche bank research

69% of PCPs have Heard of Bydureon – Excitement.



Q1: Prior to participating in this survey, were you aware of once-weekly exenatide (Bydureon), which is being developed for type II diabetes?

- 69% said Yes, 31% No
- Surprised by readout. Expected this with endos not PCPs.
- Indicates excitement over Bydureon



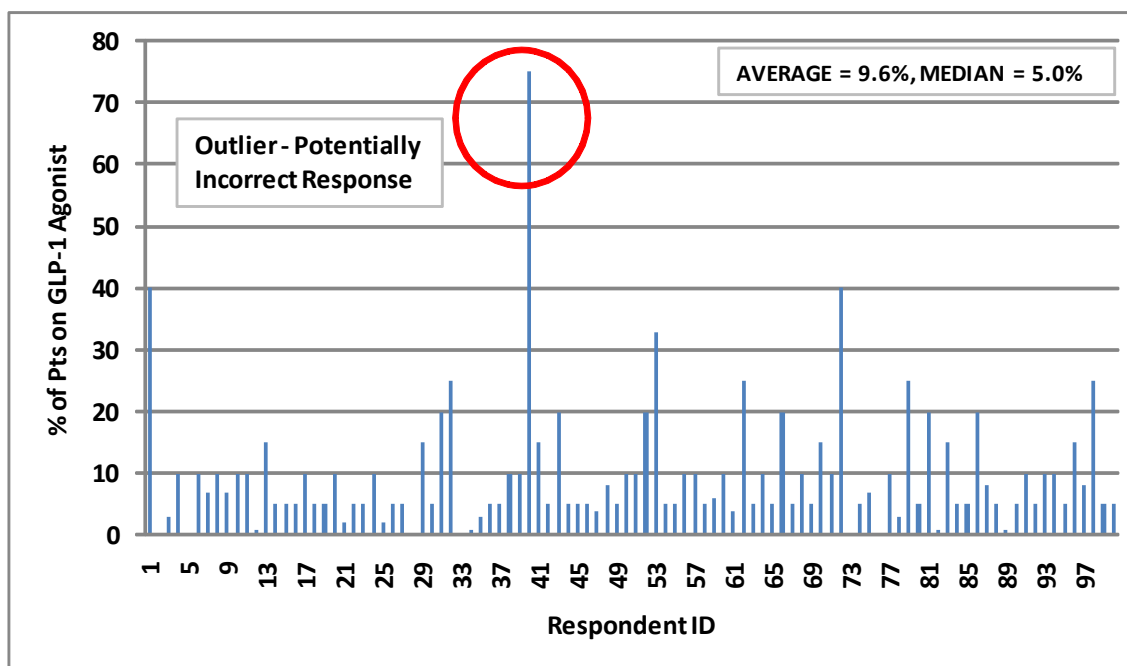
Source: Deutsche bank research

9.6% of Pts are Treated with a GLP-1 Agonist – Bit High



Q2: *What percentage of your type II diabetes patients are currently being treated with a GLP-1 agonist (either exenatide [Byetta] or liraglutide [Victoza])?*

- Average: 9.6%
- Surprised by readout. Appears high.
- Our calculations indicate 2-3% of patients are treated with GLP-1.



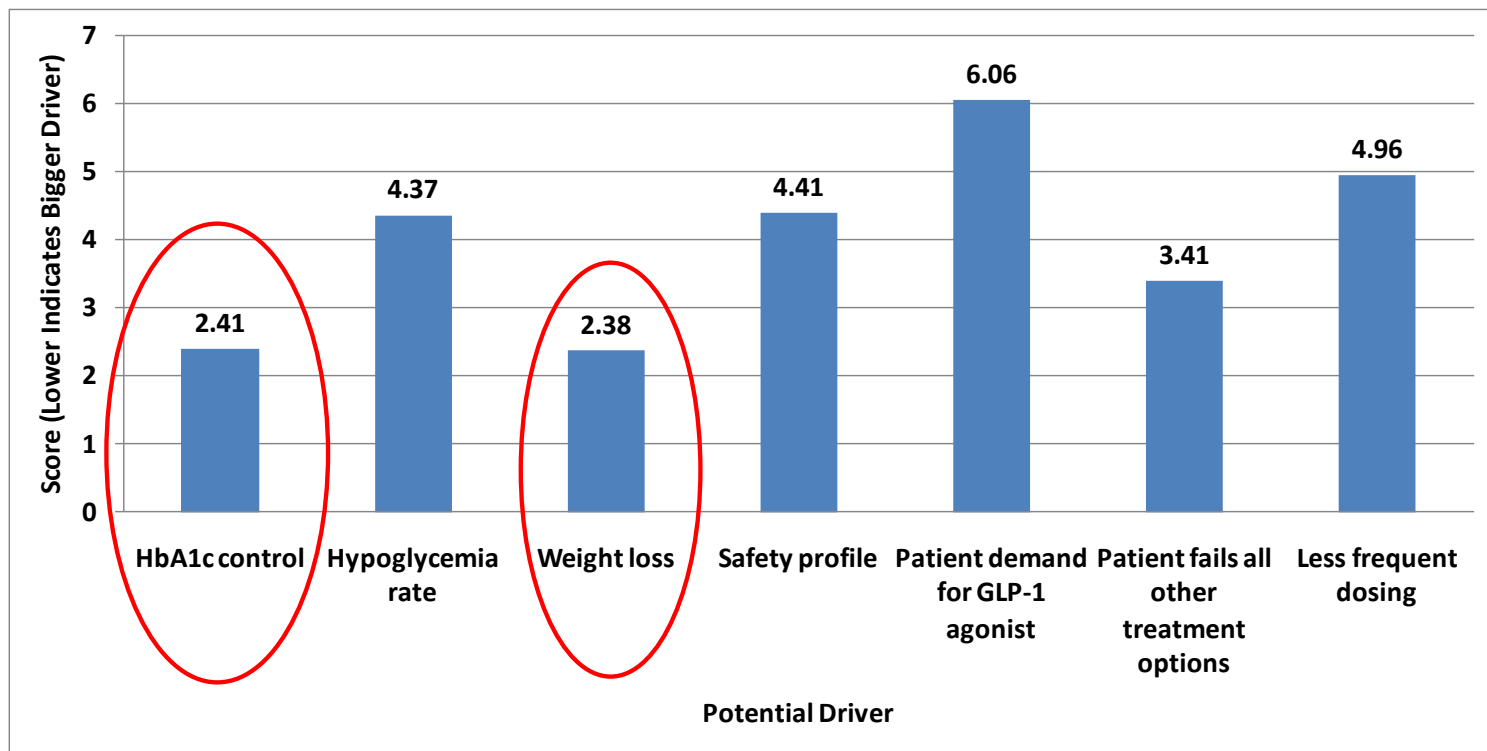
Source: Deutsche bank research

HbA1c Control & Weight Loss BIGGEST Drivers of Use



Q3: Which of the below factors are the biggest drivers for you to prescribe a GLP-1 agonist to your type II diabetes patients? Please RANK them in order where 1=BIGGEST driver, 2=second biggest driver, etc.

- HbA1c control & weight loss were BIGGEST drivers of use.
- Patient demand was the smallest driver.



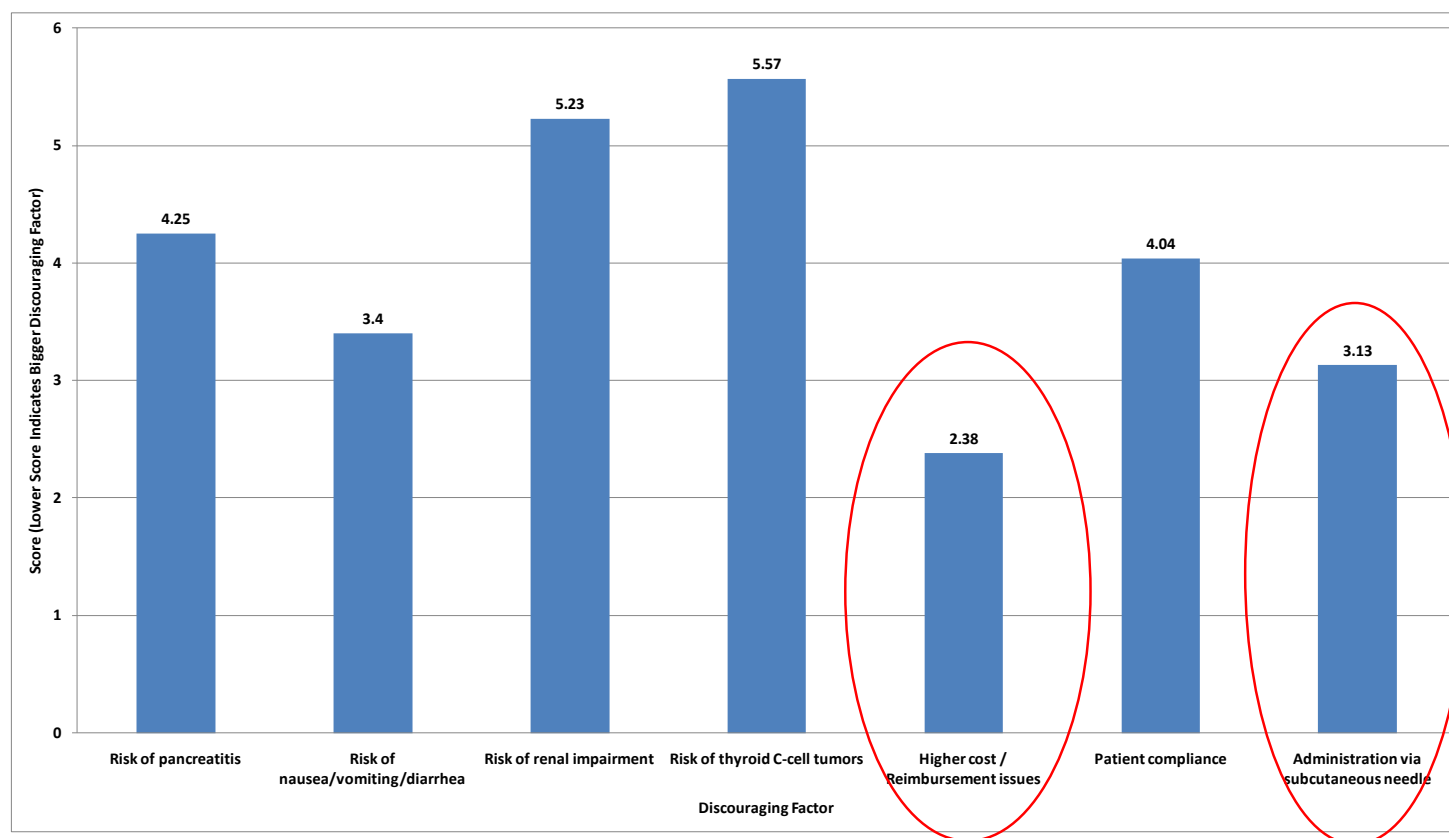
Source: Deutsche bank research

Cost & Injection BIGGEST Discouragers of Use



Q4: Which of the below factors discourages you the most from prescribing a GLP-1 agonist to your type II diabetes patients? Please RANK them in order where 1=BIGGEST discouraging factor, 2=second biggest discouraging factor.

- Cost & administration via pen BIGGEST discouraging factors
- Safety signals (pancreatitis & thyroid) not of much concern.

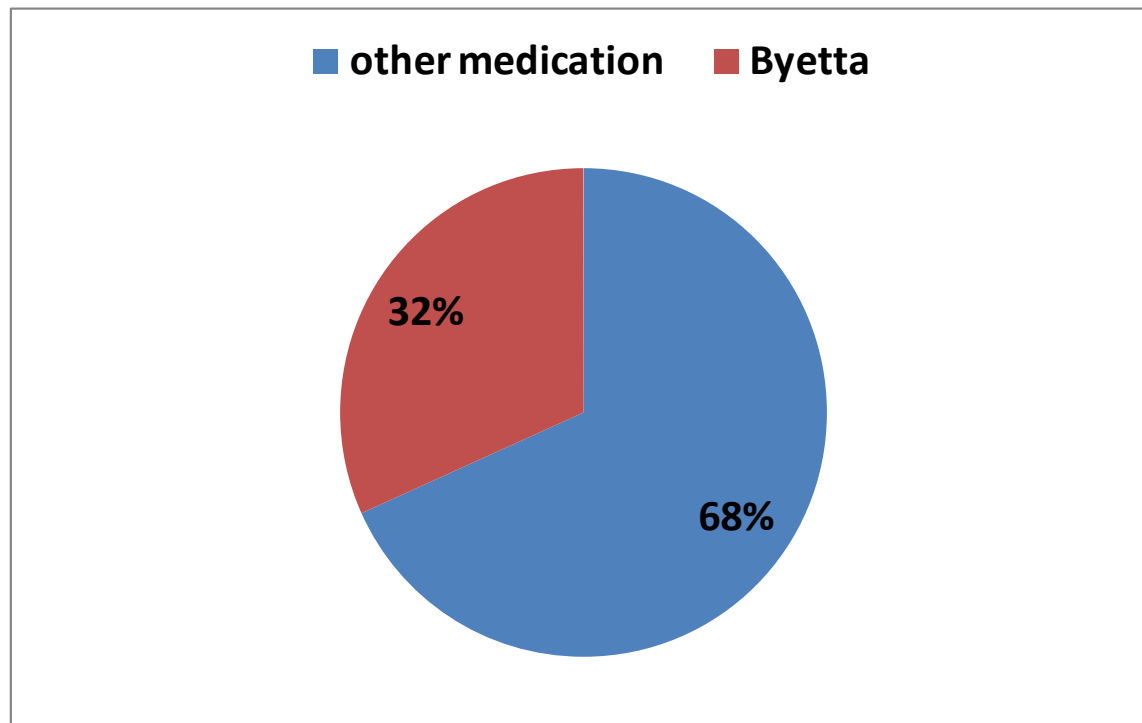


68% of Victoza Pts are NEW – Indicates Market Growth



Q5: What percentage of your type II diabetes patients that are currently on liraglutide (Victoza) were previously on exenatide (Byetta) and what percentage were previously on a different medication?

- WE THINK THIS IS A KEY QUESTION
- 68% Victoza pts coming from other medication – only 32% from Byetta
- Majority of pts are NEW. Indicates market growth.



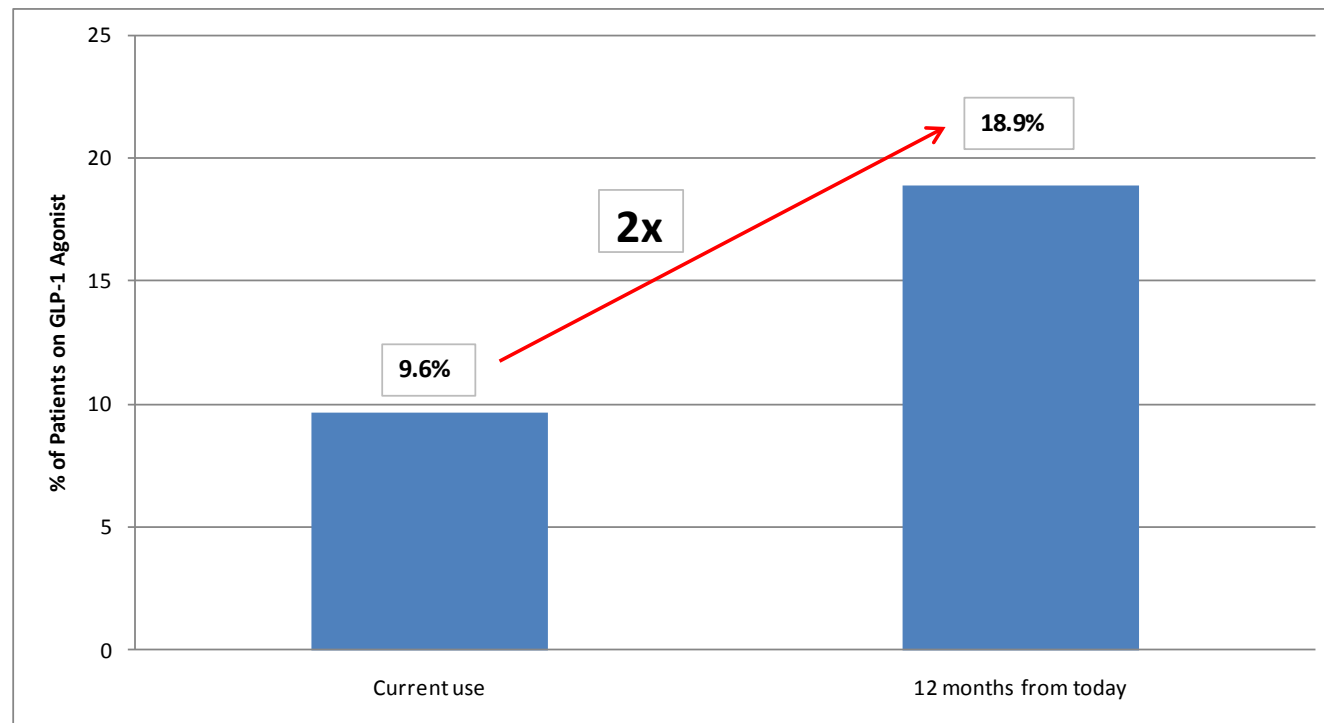
Source: Deutsche bank research

GLP-1 Use Expected to DOUBLE in 12 Months



Q6: Thinking ahead 12 months from today, what percentage of your type II diabetes patients do you expect will be treated with a GLP-1 agonist (including potential once weekly GLP-1 agents)?

- GLP-1 Use expected to DOUBLE in 12 months.
- Positive signal.



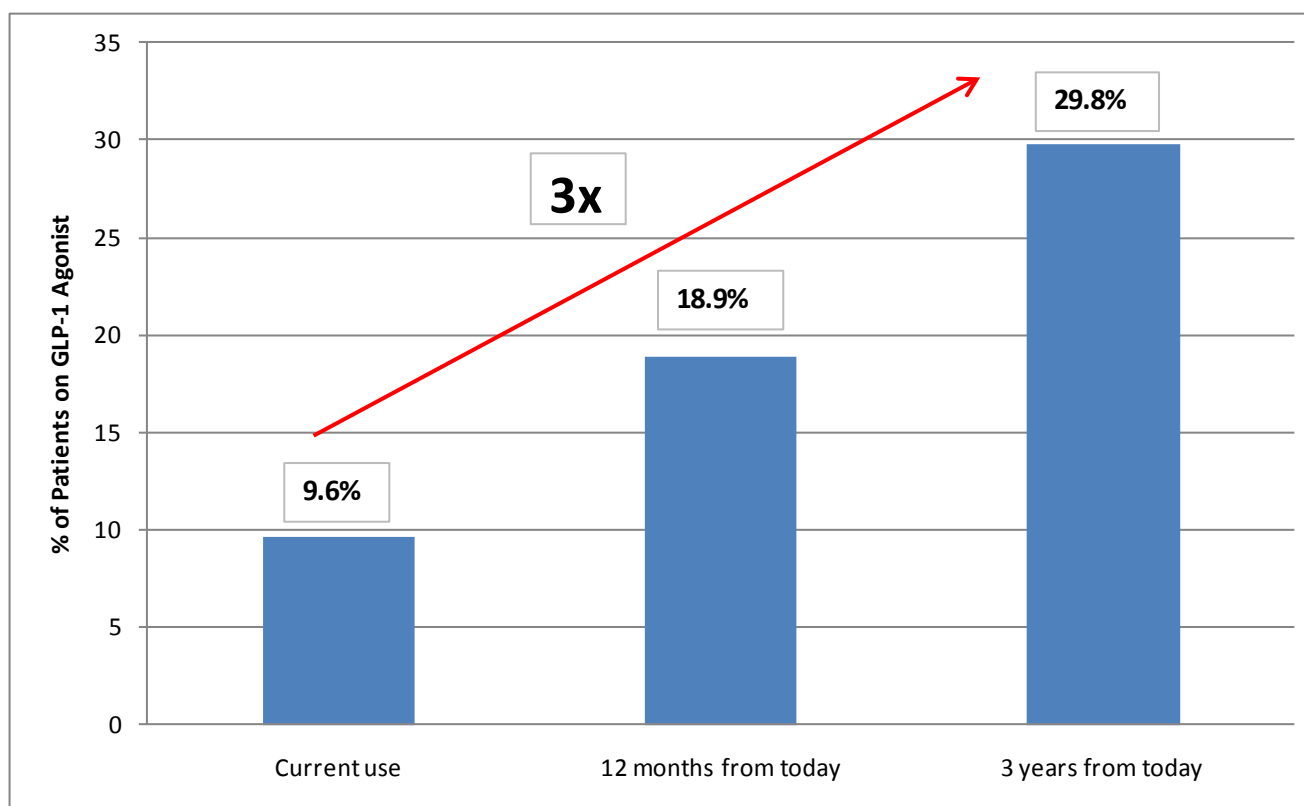
Source: Deutsche bank research

GLP-1 Use Expected to Triple in 3 Years



Q7: Thinking ahead 3 years from today, what percentage of your type II diabetes patients do you expect will be treated with a GLP-1 agonist (including potentially once weekly GLP-1 agents)?

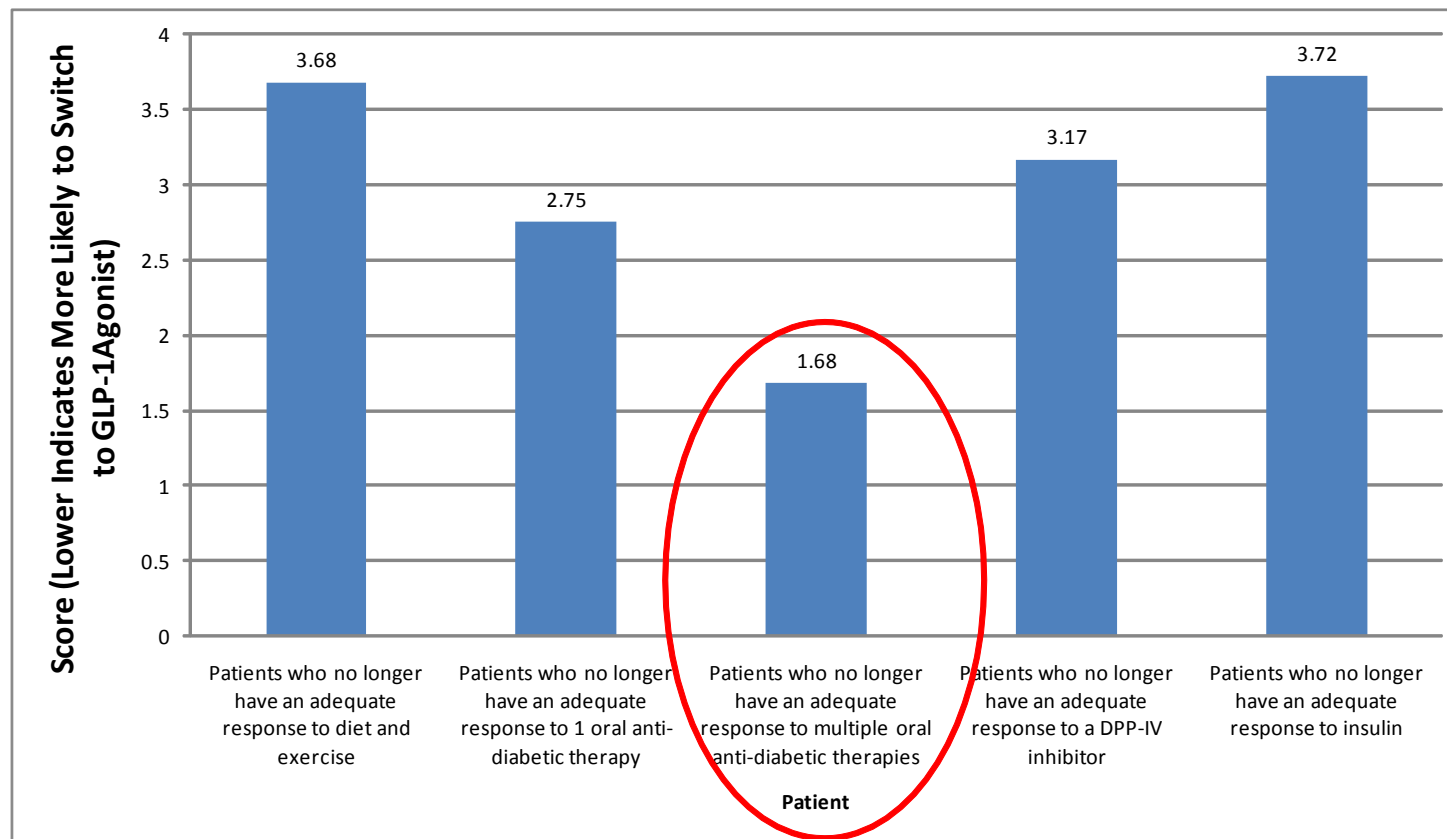
- GLP-1 use expected to TRIPLE in 3 years.
- Very positive signal.



Inadequate Responders to Oral is the TARGET Pop



Q7: Which subset of your type II diabetes patients that are not currently on a GLP-1 agonist would be most likely to convert to a GLP-1 agonist (including potentially once weekly GLP-1 agents)? Please RANK them in order where 1=MOST LIKELY subset, 2=second likely subset



Source: Deutsche bank research

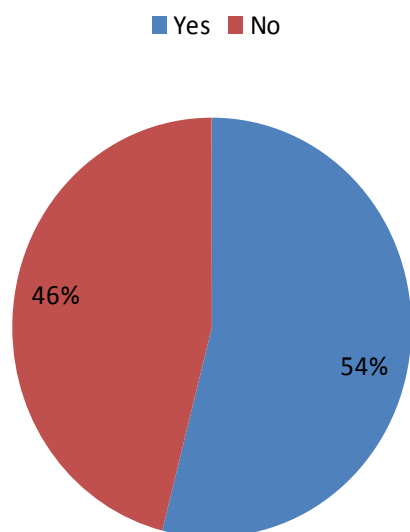
Docs Think 76% of Pts Would Switch to Bydureon



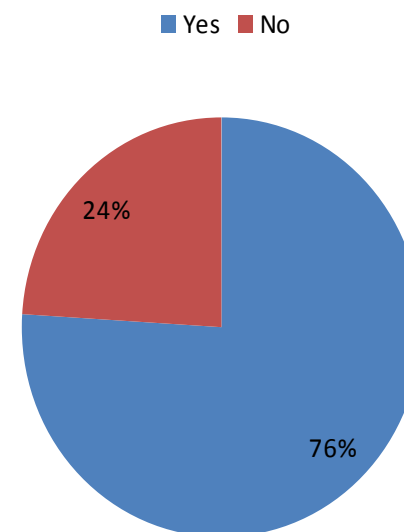
Q10a: If a patient is responding well to a treatment, would **you** want to switch the patient to once a week exenatide (Bydureon) due to less frequent dosing?

Q10b: If a patient is responding well to a treatment, do you think the **patient** would want to switch to once a week exenatide (Bydureon) due to less frequent dosing?

Physician Choice



Patient Choice

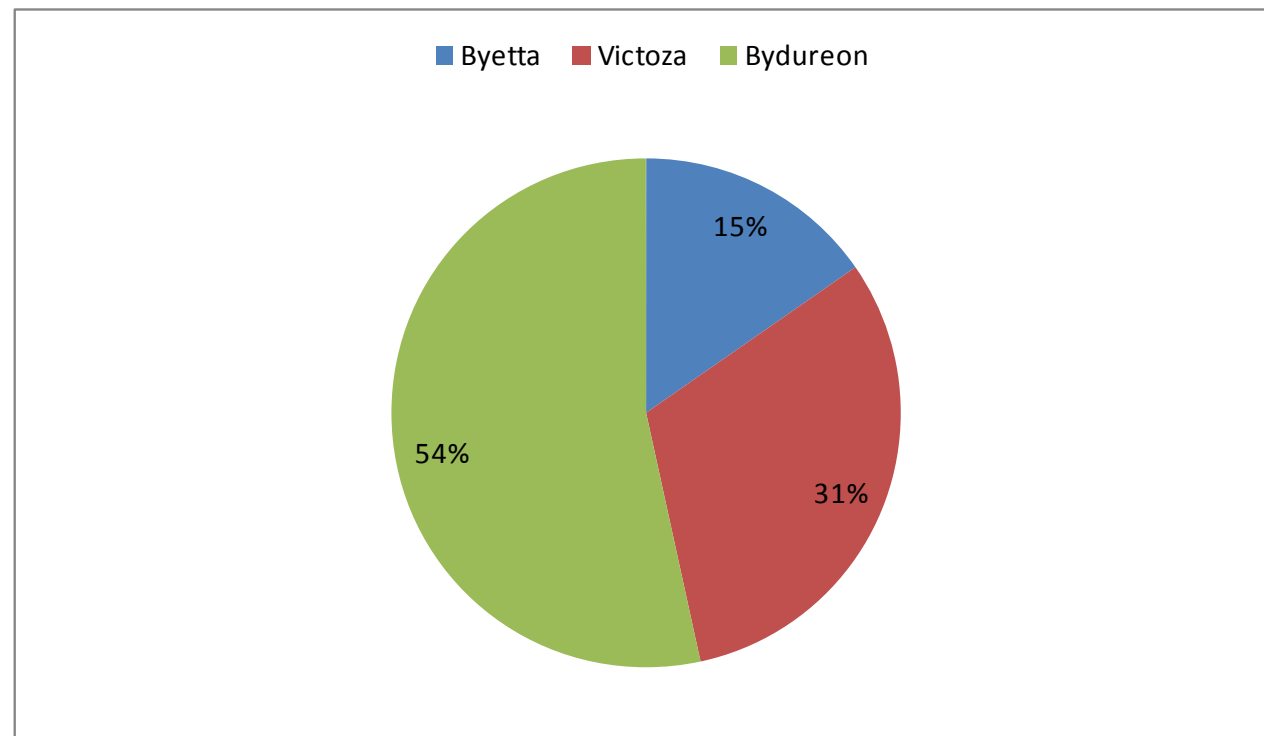


54% of Docs Prefer Bydureon



Q11: Among your type II diabetes patients who you believe are eligible for either therapy, what percentage do you think would prefer each medication?

- 54% prefer Bydureon. 31% prefer Victoza.
- 15% prefer Byetta. Seems a bit high given inferior profile of Byetta.

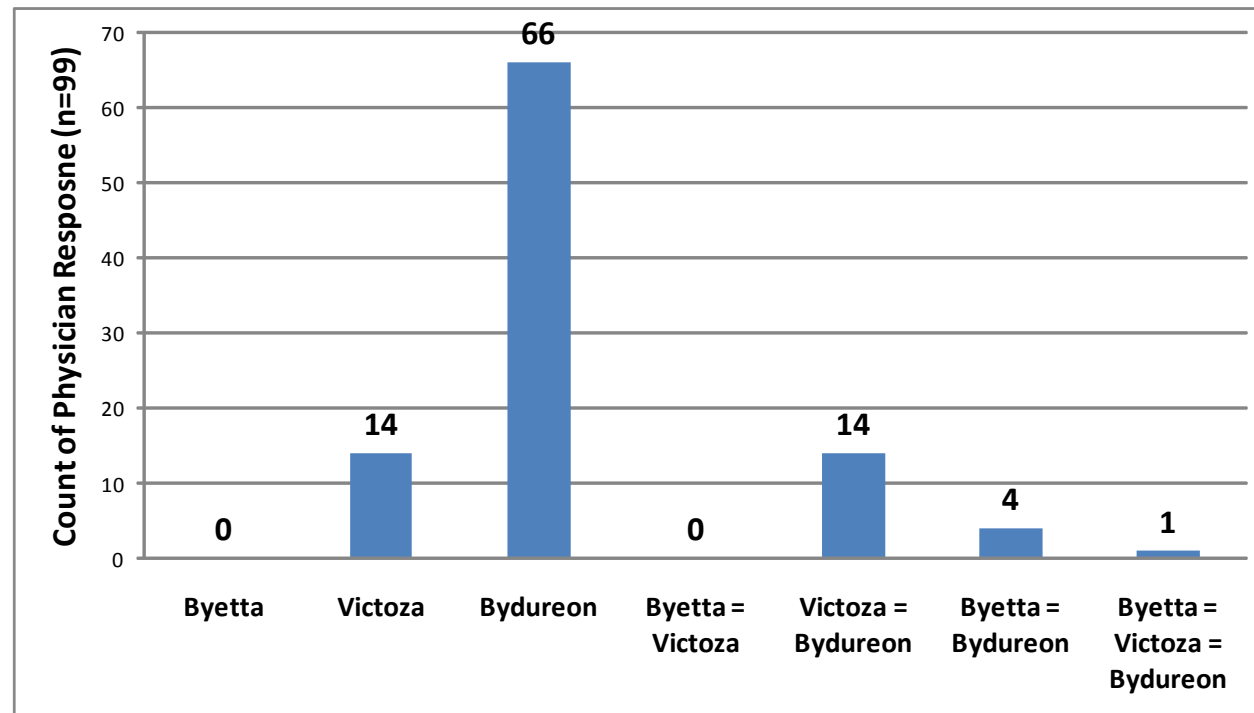


66% of Docs Believe Bydureon has Best Compliance



Q12: Based on the product descriptions given in the previous question on exenatide (Byetta), liraglutide (Victoza) and once-weekly exenatide (Bydureon). Which product do you believe will have better patient compliance?

- 66% of physicians believe Bydureon would have best compliance.
- 14% said Victoza
- 14% said Victoza has EQUAL compliance to Bydureon.

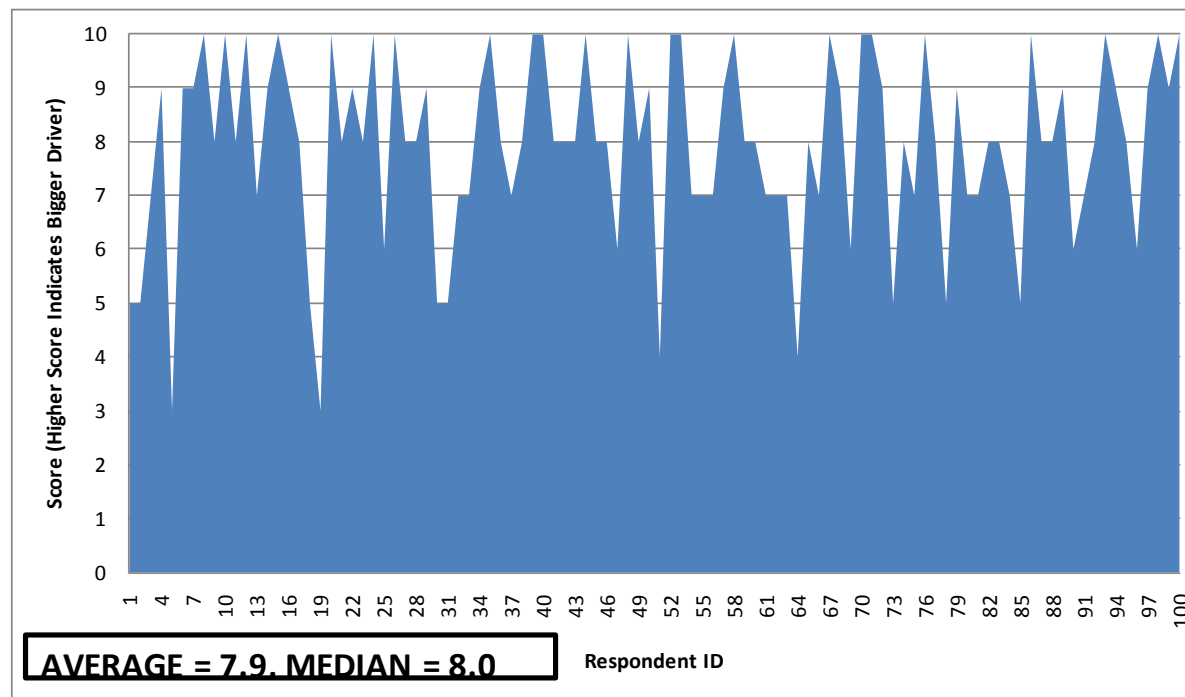


Less Frequent Dosing is a MAJOR Driver



Q13: Once weekly exenatide (Bydureon) is administered less frequently vs. exenatide (Byetta), which is twice a day, and liraglutide (Victoza), which is once a day. On a scale of 0-10, how large of a DRIVER for use is the less frequent dosing with Bydureon? 0=NOT a driver and 10= MAJOR driver.

- Average score = 7.9
- Indicates less frequent dosing is a MAJOR driver of use.

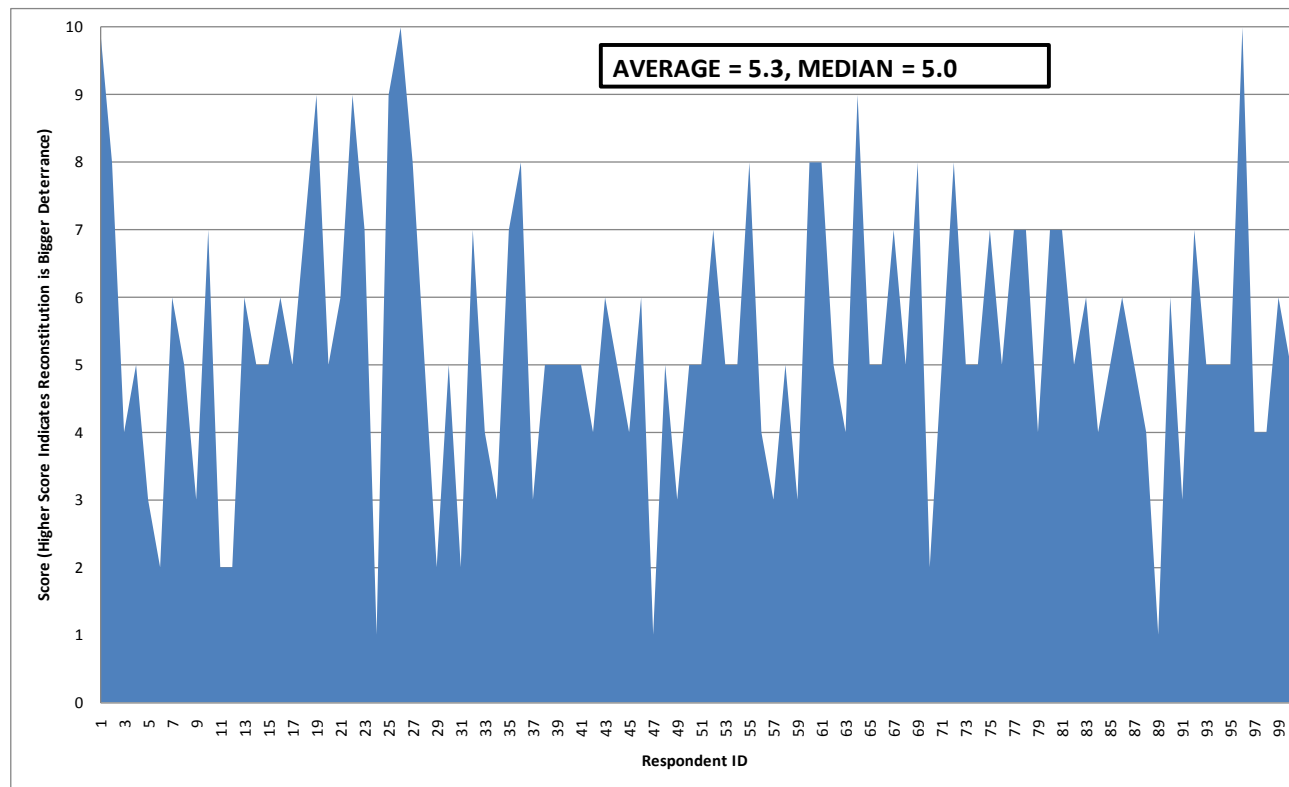


Reconstitution is a MODERATE Deterrent



Q14: Exenatide once weekly (Bydureon) needs to be reconstituted for use. This is a multi-step process that requires a vial and syringe. On a scale of 0-10, how would you rate the level of DETERRENCE to use due to this reconstitution process? 0=NO deterrence and 10= HIGHEST level of deterrence.

- Average score = 5.3
- Indicates reconstitution is a MODERATE deterrent.

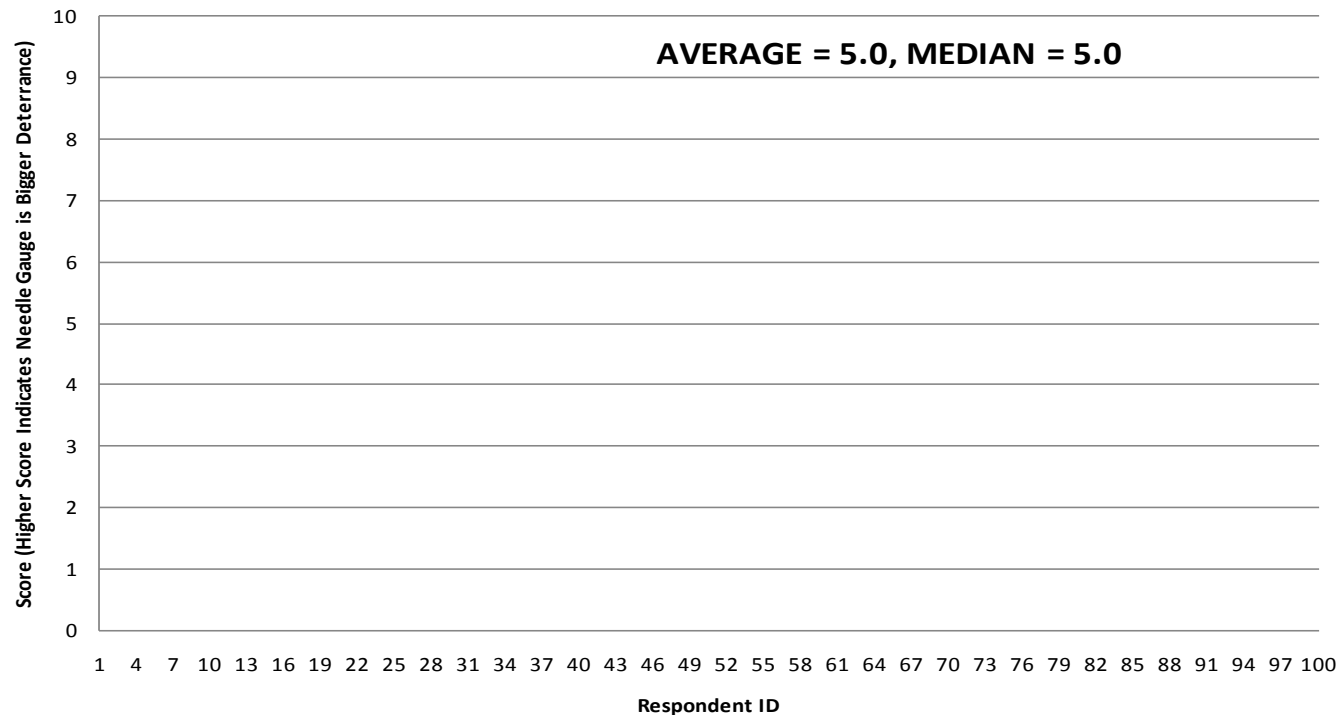


23 Gauge Bydureon Needle is a MODERATE Deterrent



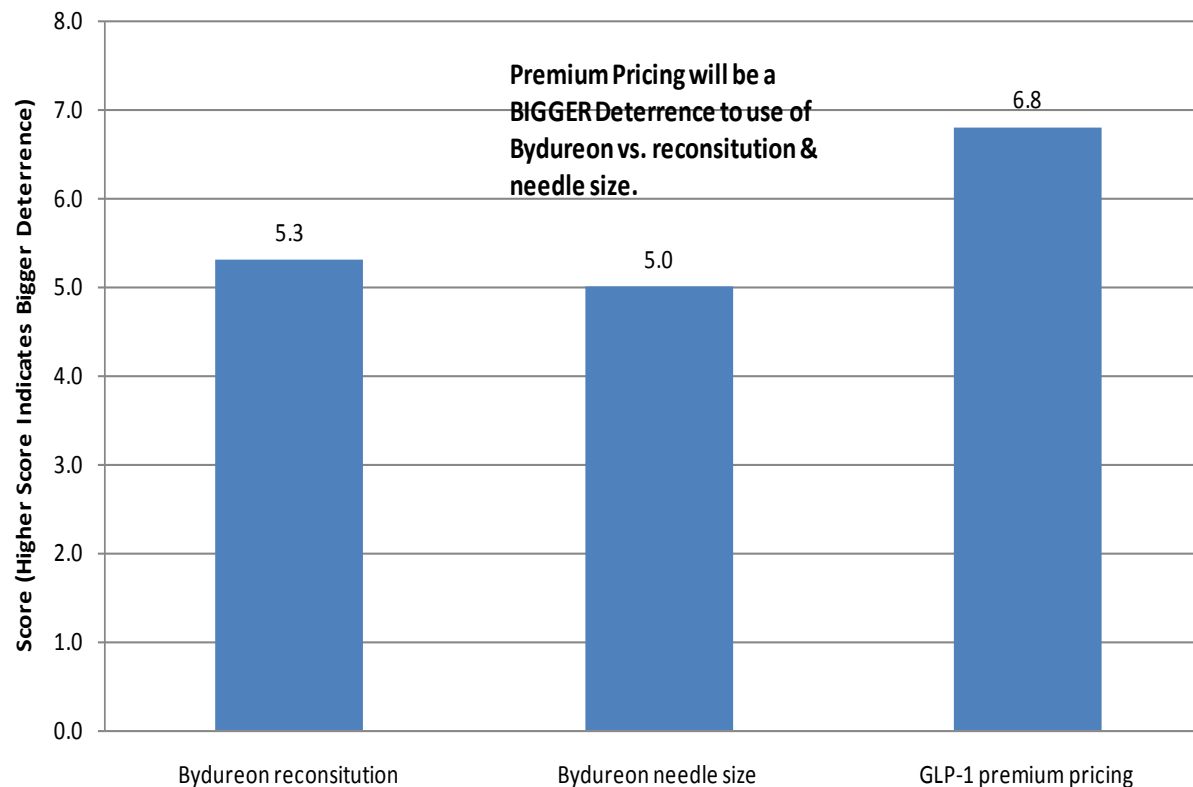
Q15: Exenatide once weekly (Bydureon) comes in a 23 gauge subcutaneous needle. On a scale of 0-10, how would you rate the level of DETERRENCE in use due to this needle size? 0=NO deterrence and 10= HIGHEST level of deterrence

- Average score = 5.0
- Indicates 23 gauge needle is a MODERATE deterrent.



Cost is Bigger Deterrent vs. Reconstitution & Needle Size

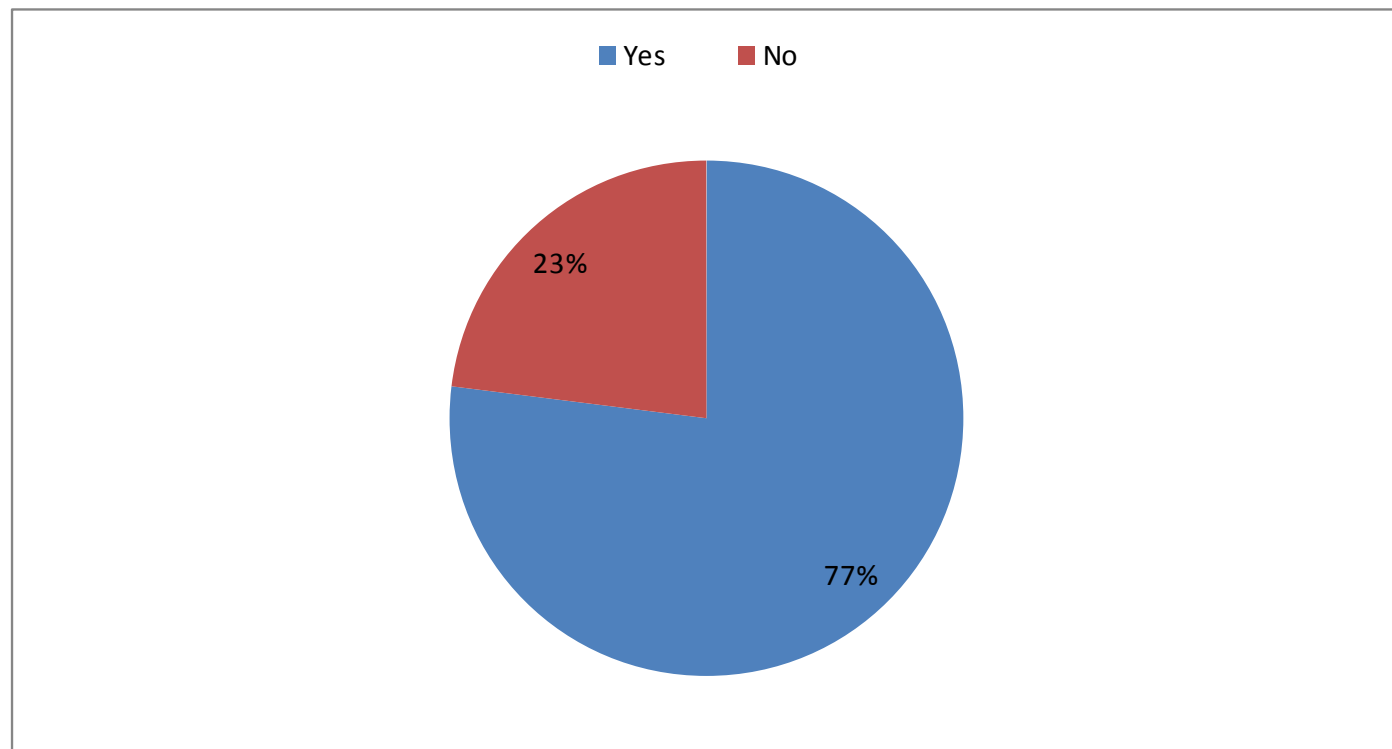
Q16: Liraglutide (Victoza) is priced with a premium to exenatide (Byetta). Pricing for once weekly exenatide (Bydureon) has not been announced. GLP-1 agonists are also priced at a premium to oral therapies and insulin. On a scale of 0-10, how would you rate the level of DETERRENT to use due to premium pricing? 0=NO deterrence and 10= HIGHEST level of deterrence.



Source: Deutsche bank research

77% believe Bydureon Benefits OUTWEIGH Disadvantages

Q17: Do you believe the benefits of once weekly exenatide (Bydureon) outweigh the disadvantages? Benefits include: 1) better HbA1c control, 2) weight loss and 3) once weekly dosing. Disadvantages include: 1) reconstitution process, 2) larger 23 gauge needle and 3) higher cost.



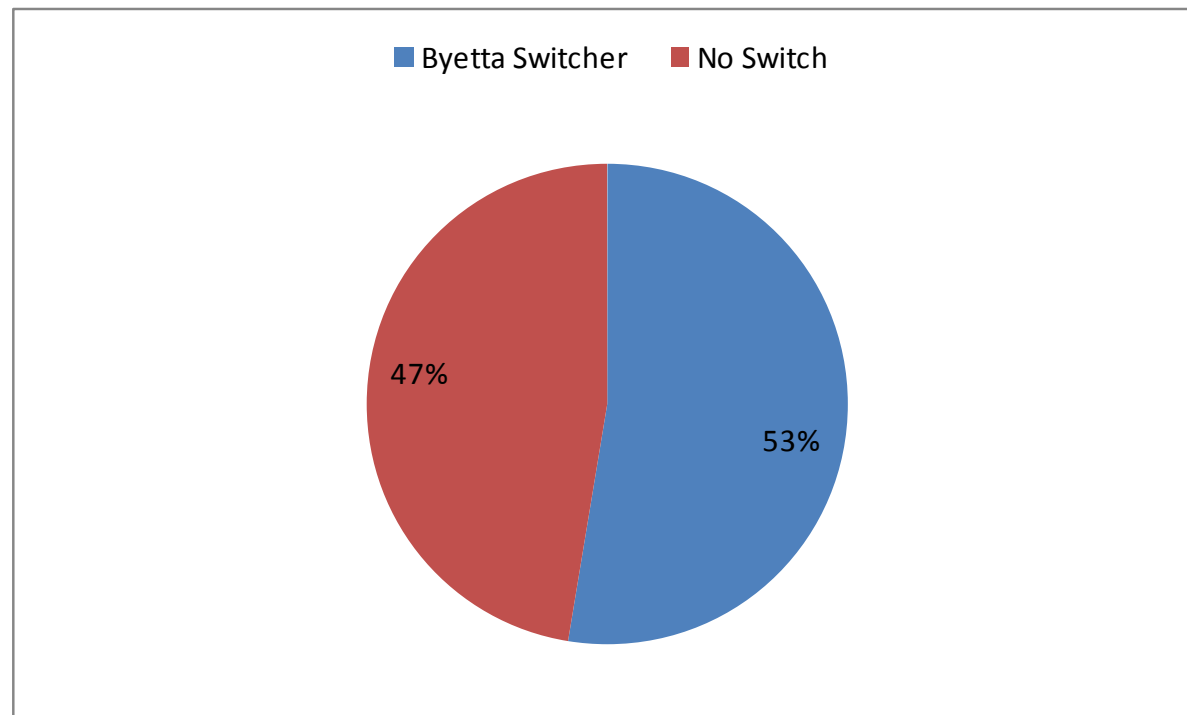
Source: Deutsche bank research

53% of Byetta Pts Expected to Switch to Bydureon



Q18a: *If once weekly exenatide (Bydureon) receives FDA approval for type II diabetes, what percentage of patients currently on **exenatide (Byetta)** would you switch to once weekly exenatide (Bydureon)?*

- 53% Byetta patients expected to switch to Bydureon
- Would have expected a higher percentage

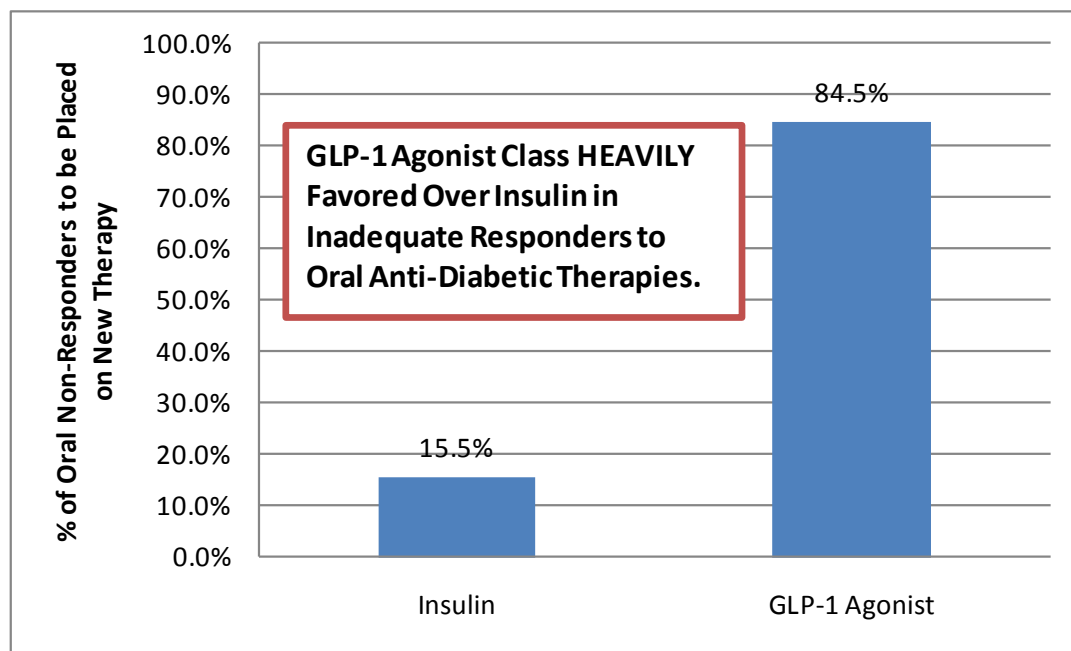
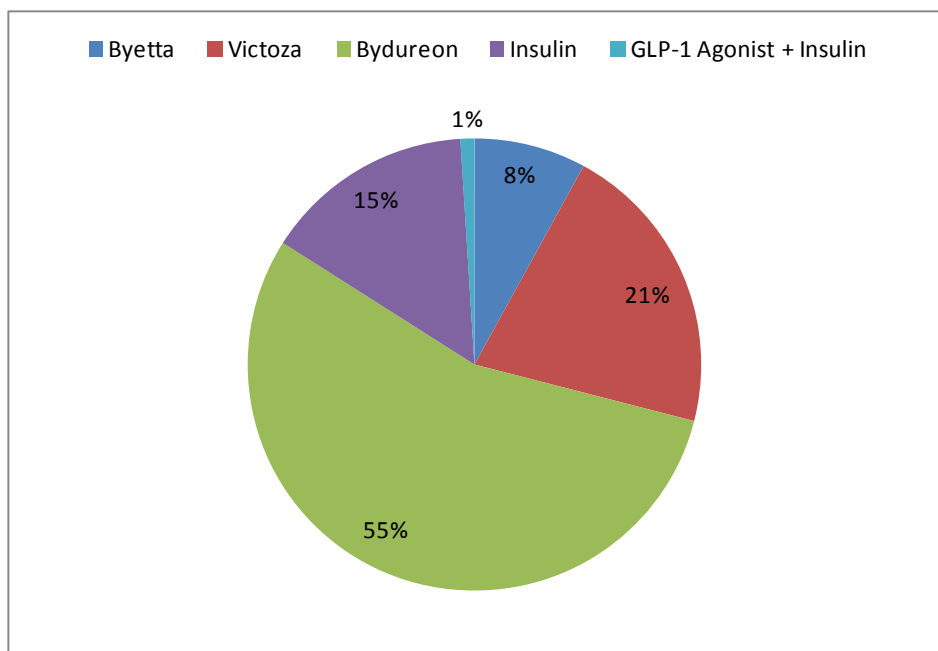


GLP-1 Class Expected to be Used Over Insulin



Q19. If a patient was no longer responding adequately to oral therapies, would you place this patient on exenatide (Byetta), liraglutide (Victoza), once weekly exenatide (Bydureon), a form of insulin, or a combination of GLP-1 and insulin?

- This is the TARGET population for Bydureon
- Bydureon expected to get 55% of this market
- GLP-1 class HEAVILY favored over insulin



Source: Deutsche bank research

Survey Bottom-Line: Bydureon Prospects Appear Solid



Key takeaways from 100 physician PCP Survey

- 1 69% of physicians are aware of Bydureon
- 2 HbA1c control & weight loss are biggest drivers of GLP-1 use
- 3 High costs & needle are biggest discouragers of GLP-1 prescription
- 4 68% of Victoza Rx are from NON-byetta switchers
- 5 GLP-1 use expected to double in next 12 months
- 6 GLP-1 use expected to triple in next 36 months
- 7 GLP-1 agonist + insulin use limited at 2.9% but expected to increase to 8.2% in 12 months
- 8 54% of physicians would want to switch their patient who is responding well to therapy to Bydureon due to less frequent dosing
- 9 76% of patients would want to switch to Bydureon even if doing well on other drugs- due to less frequent dosing.
- 10 Bydureon needle gauge and reconstitution process are moderate deterrents
- 11 Cost is a BIGGER hurdle to use than reconstitution and needle size
- 12 77% of Docs believe Bydureon benefits OUTWEIGH disadvantages
- 13 53% of Byetta patients to switch to Bydureon upon approval
- 14 Victoza more of a competitor – Only 38% of Victoza patients to switch to Bydureon
- 15 Bydureon to take 55% share of inadequate responders to oral therapy
- 16 Novo Nordisk appears to have best sales reps but difference is small – In-line with industry checks.

Source: Deutsche bank research



How we arrive at our \$3B in peak sales for
Bydureon in 2020?

**#2. Conversations w/ endocrinologists gave
a positive readout for Bydureon**

Early Victoza Experience – Expect to Switch to Bydureon



- Described Victoza as distinct but no overwhelmingly advantageous.
- Victoza has better HbA1c reduction and less nausea vs. Byetta.
- Have switched majority of Byetta patients to Victoza
- Looking ahead to Bydureon – View as Evolution to Diabetes Treatment
- Expect to switch majority of Victoza & remaining Byetta pts to Bydureon.
- Stated it would be “almost unethical” not to offer once weekly treatment.

Endos will also Increase GLP-1 Use w/ Bydureon Taking Majority Share

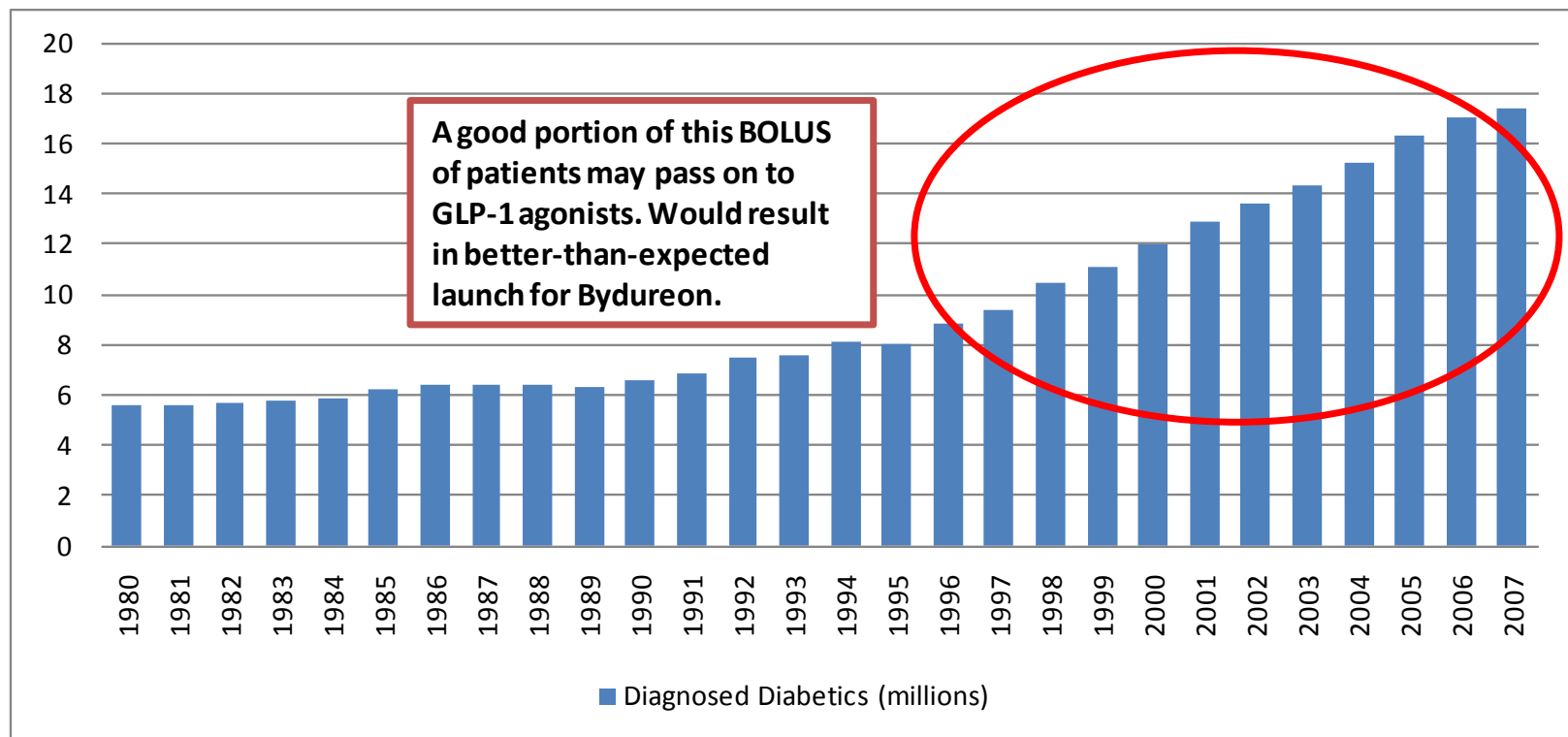


- 10%-15% of pts were on Byetta when it was the only therapy available
- With launch of Victoza - 20% of pts are on a GLP-1 agonist
- Once Bydureon is launched - Expect 30% of pts to be on a GLP-1
- This is a DOUBLING of GLP-1 use by endocrinologists.
- Also expect Bydureon to hold DOMINATE market share at ~80%.
- Endos expect PCPs to increase use by 3x-4x (conservative).

INTERESTING POINT – Bolus of Patients in Pipeline – Eligible for Bydureon – Could help with Launch



- Pts that were diagnosed in the 1990's and early 2000's are now failing oral therapy and will be eligible for DPP-IV inhibitors & GLP-1 agonist.
- Endos expect to place a chunk of these pts on GLP-1s prior to insulin.



INTERESTING POINT # 2 – Fewer Injections are Good for Patient Morale – Positive for Bydureon



- Pts do not like injections as it makes them feel they are getting worse.
- This has been the experience with Byetta.
- Patients are reminded twice a day they are getting worse.
- With Bydureon this feeling will not be present due to once a week dosing.



How we arrive at our \$3B in peak sales for
Bydureon in 2020?

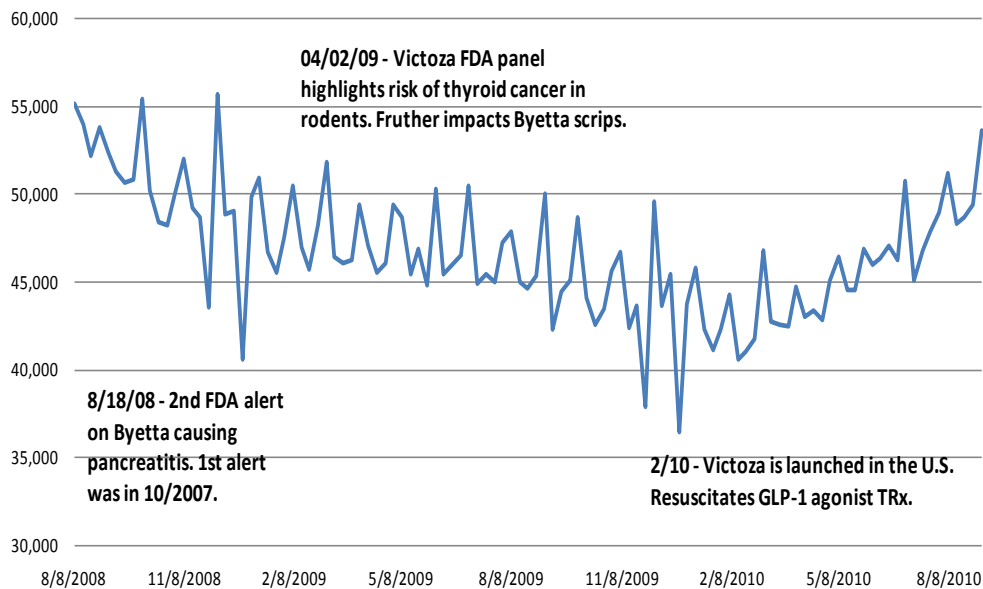
#3. Victoza Resuscitated GLP-1 TRx NRx & Survey Indicate Growth in Future

GLP-1 TRx has Rebounded to Pre-Byetta Alert Levels

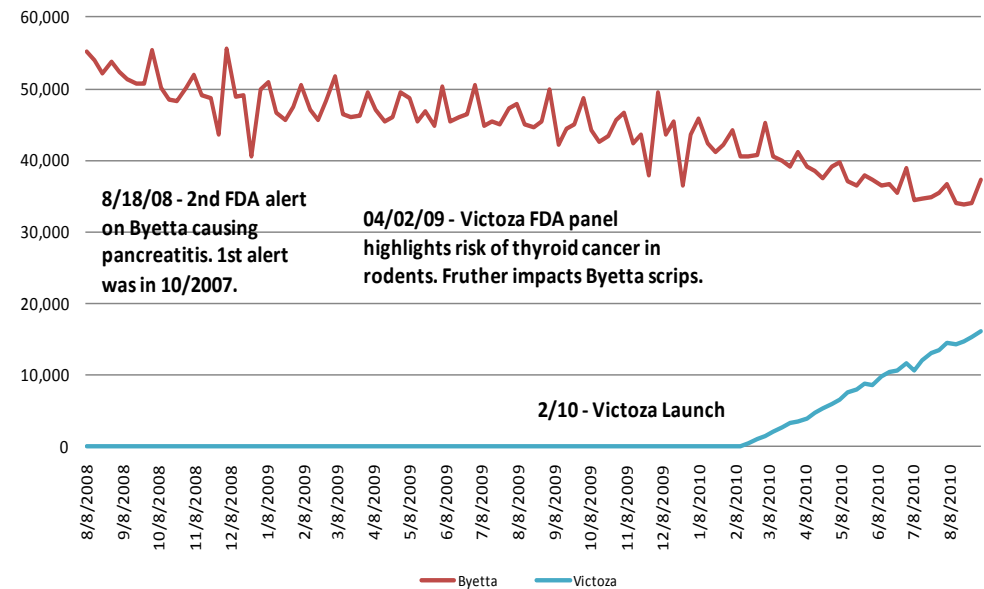


- Byetta TRx on downtrend since FDA alert on pancreatitis
- Victoza launch brought TRx to near pre-Byetta FDA alert level
- TRx up +18% since Victoza launch – Victoza has 30% TRx share
- Will growth continue?

IMS GLP-1 TRx



IMS GLP-1 TRx Market Share

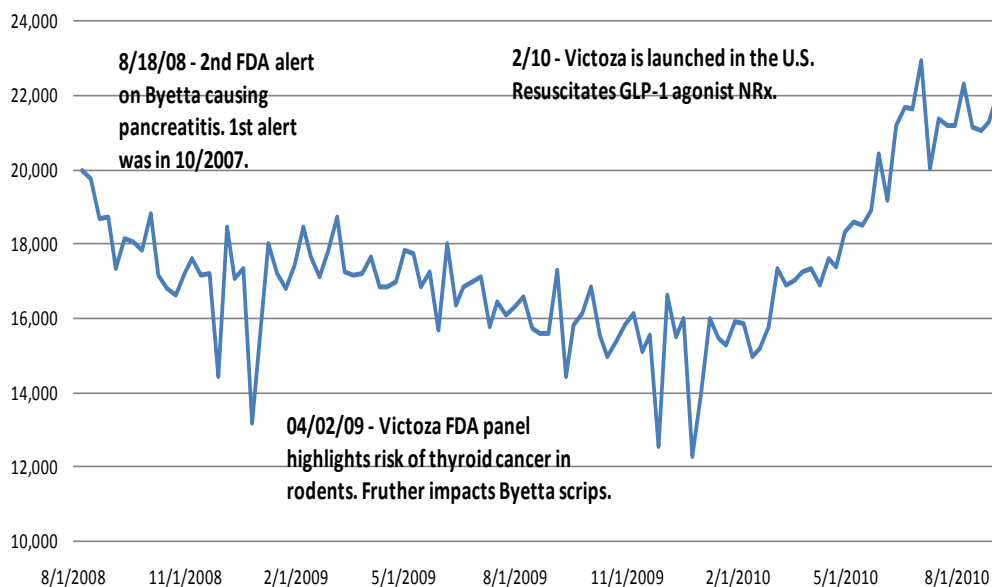


GLP-1 NRx is Above Pre-Byetta Alert Levels

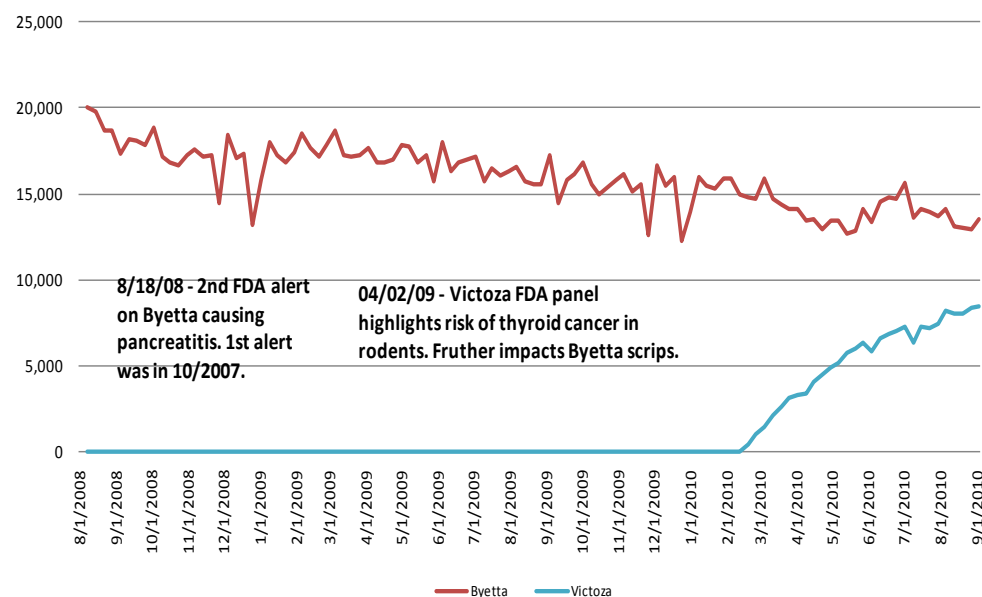


- Byetta NRx also on downtrend since FDA alert on pancreatitis
- Victoza launch brought NRx to ABOVE pre-Byetta FDA alert level
- NRx up +38% since Victoza launch – Victoza has 37% NRx share
- Will growth continue?

IMS GLP-1 NRx



IMS GLP-1 NRx Market Share



At Critical Point - NRx & Survey Indicate Future Growth



- At a critical point in TRx trajectory.
- Have recovered all TRx and NRx lost to FDA alert.
- **BIG QUESTION - How much further up do we go from here?**
- ANSWER – Very unclear of the EXACT future growth.
- **But NRx volume looks SOLID. NRx is a leading indicator of TRx.**
- **High NRx should lead to good future TRx growth.**
- **Additionally – DB PCP survey also indicates future growth.**



How we arrive at our \$3B in peak sales for
Bydureon in 2020?

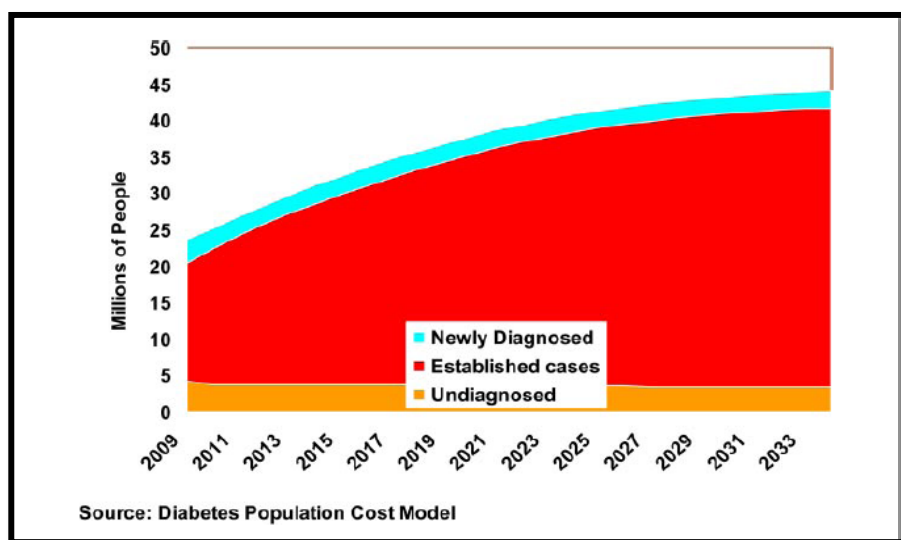
#4. Our analysis of diabetes market growth bodes well for Bydureon

We expect the number of treated diabetes patients to grow by 59% by 2020

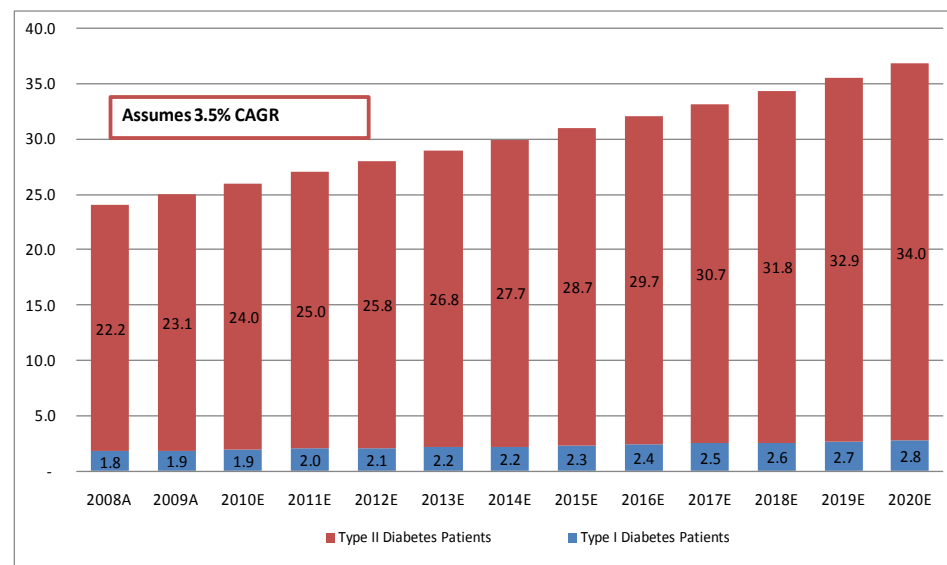


- Diabetes is expected to grow from 24M to 38M by 2020 (3.5% CAGR)
 - CDC data/Huang et al in diabetes care 2009
- We assume the % of patient diagnosed will increase by 0.6% CAGR
 - CDC data supports this
- We assume treatment rates will increase by 0.3% CAGR
 - CDC data supports this

Diagnosed diabetes projections by Huang



Diagnosed diabetes projections by CDC



Based on these assumptions, we model 15M type 2 diabetes patients being treated NOW growing to 24M by 2020



DB: Bio – Diabetes market model projections

| U.S. Diabetes Market | 2008A | 2009A | 2010E | 2011E | 2012E | 2013E | 2014E | 2015E | 2016E | 2017E | 2018E | 2019E | 2020E |
|---|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Diabetes Prevalence | | | | | | | | | | | | | |
| Total Number of Diabetes Patients | 24.0 | 25.0 | 26.0 | 27.0 | 27.9 | 28.9 | 29.9 | 31.0 | 32.1 | 33.2 | 34.3 | 35.5 | 36.8 |
| Type I Diabetes Patients | 1.8 | 1.9 | 1.9 | 2.0 | 2.1 | 2.2 | 2.2 | 2.3 | 2.4 | 2.5 | 2.6 | 2.7 | 2.8 |
| Type II Diabetes Patients | 22.2 | 23.1 | 24.0 | 25.0 | 25.8 | 26.8 | 27.7 | 28.7 | 29.7 | 30.7 | 31.8 | 32.9 | 34.0 |
| % Type I Diabetes | 7.5% | 7.5% | 7.5% | 7.5% | 7.5% | 7.5% | 7.5% | 7.5% | 7.5% | 7.5% | 7.5% | 7.5% | 7.5% |
| % Type II Diabetes | 92.5% | 92.5% | 92.5% | 92.5% | 92.5% | 92.5% | 92.5% | 92.5% | 92.5% | 92.5% | 92.5% | 92.5% | 92.5% |
| Prevalence Growth Rate | | | | | | | | | | | | | |
| Estimates Growth Rate | 4.0% | 4.0% | 4.0% | 4.0% | 3.5% | 3.5% | 3.5% | 3.5% | 3.5% | 3.5% | 3.5% | 3.5% | 3.5% |
| Diagnosed Diabetes Population | | | | | | | | | | | | | |
| Total Diagnosed Diabetes Patients | 17.4 | 18.2 | 19.1 | 20.1 | 20.9 | 21.8 | 22.8 | 23.8 | 24.8 | 25.9 | 27.0 | 28.1 | 29.3 |
| % Diagnosed | 73% | 73% | 74% | 74% | 75% | 76% | 76% | 77% | 77% | 78% | 79% | 79% | 80% |
| Total Undiagnosed Diabetes Patients | 6.6 | 6.7 | 6.8 | 6.9 | 7.0 | 7.1 | 7.2 | 7.2 | 7.3 | 7.3 | 7.4 | 7.4 | 7.5 |
| % Undiagnosed | 28% | 27% | 26% | 26% | 25% | 25% | 24% | 23% | 23% | 22% | 22% | 21% | 20% |
| Diagnosed Type I Diabetes Patients | 1.3 | 1.4 | 1.4 | 1.5 | 1.6 | 1.6 | 1.7 | 1.8 | 1.9 | 1.9 | 2.0 | 2.1 | 2.2 |
| Diagnosed Type II Diabetes Patients | 16.1 | 16.9 | 17.7 | 18.6 | 19.4 | 20.2 | 21.1 | 22.0 | 22.9 | 23.9 | 24.9 | 26.0 | 27.1 |
| Treated Type II Diabetes Population | | | | | | | | | | | | | |
| Total Treated Type II Diabetes Patients | 13.6 | 14.3 | 15.0 | 15.8 | 16.6 | 17.3 | 18.2 | 19.0 | 19.9 | 20.8 | 21.8 | 22.8 | 23.9 |
| % Treated Type II Diabetes Patients | 84% | 85% | 85% | 85% | 86% | 86% | 86% | 86% | 87% | 87% | 87% | 88% | 88% |
| Total Untreated Type II Diabetes Patients | 2.5 | 2.6 | 2.7 | 2.7 | 2.8 | 2.9 | 2.9 | 3.0 | 3.0 | 3.1 | 3.2 | 3.2 | 3.3 |
| % Untreated Type II Diabetes Patients (Diet & Exercise) | 16% | 15% | 15% | 15% | 14% | 14% | 14% | 14% | 13% | 13% | 13% | 12% | 12% |

Source: Deutsche bank research,



How we arrive at our \$3B in peak sales for
Bydureon in 2020?

**#5. Our analysis of the competitive landscape suggests
Bydureon will be best in class**

Not only does Bydureon look better than Victoza across studies, but also emerging competitors



Competitive landscape summary

| Company | Compound | Development Stage |
|-----------------------------------|--------------|------------------------------------|
| Once Weekly GLP-1 Agonists | | |
| Amylin/Lilly | Bydureon | Filed NDA - Oct 22nd PDUFA |
| GSK | Syncria | Ph 3 - Potential Launch in 2013 |
| Roche | Taspoglutide | Ph 3 trials suspended |
| Lilly | LY2189265 | Ph 3 trials - Hypotension concerns |
| Novo Nordisk | Semglutide | Ph 2 trials |
| Once Daily GLP-1 Agonist | | |
| Novo Nordisk | Victoza | Marketed (+ Levemir possible) |
| Sanofi Aventis | Lixisenatide | Ph 2 trials (+ Lantus possible) |

Source: Deutsche bank research.



We expect Duration-6 will confirm Bydureon is likely superior to Victoza (data 1H11)

Competitive landscape comparison across phase 3 studies

| | Byetta (exenatide twice daily) | Victoza (liraglutide) | Bydureon (exenatide once weekly) |
|-------------------------------|---|---|--|
| Δ in HbA1c (%) | -0.7 to -0.9 | -0.8 to -1.5 | -1.5 to -1.9 |
| Weight loss (lbs) | -3.3 to -6.4 | -0.2 to -7.1 | -5.1 to -8.2 |
| % of patients with HbA1c < 7% | 31% - 53% | 42% - 54% | 60% - 77% |
| Dose | 5 mcg twice-daily. 1 hr prior to morning & evening meals. Increase to 10 mcg after 1 month. | Initial dose 0.6 mg/day for 1 wk followed by increase to 1.2 mg and 1.8 mg. Independent of meals. | 2.0 mg once weekly subcutaneous injection |
| Administration route | Subcutaneous via prefilled pen | Subcutaneous via pre-filled multi-dose pens | Syringe & vial. Needs to be reconstituted. Pen in 2012/2013. |
| Needle gauge | 29-31 | 29 | 23 (larger vs. Victoza & Byetta) |
| Nausea | 39% - 51% | 11% - 40% | 14 - 26% |

Source: Deutsche bank research.

Data unlikely to be used in marketing/label (two studies are required according to our consultants)

Bydureon also appears more effective vs. Sanofi's lixisenatide



- Sanofi presented the first of phase 3 trials of the GetGoal program for **lixisenatide** at EASD 2010 (RECENT NEW DATA)
 - Lixisenatide looks to have good HbA1c reduction (-0.73 to -0.85), but not as good as Bydureon (-1.5 at 12 weeks in Duration studies) or Victoza.
 - Additionally, the nausea rate of lixisenatide (20.2%-24.2% appears to be lower than Byetta's but more than Victoza's or Bydureon's.

Title: 12 week data from lixisenatide's phase 3

| Parameter | | Lixisenatide | | |
|----------------------|----------------------|--------------|------------------|------------------|
| | | Placebo | 2 Step Titration | 1 Step Titration |
| HbA1c (%) | Baseline | 8.07 | 7.97 | 8.06 |
| | Change from baseline | -0.19 | -0.73 | -0.85 |
| A1c <6.5% | % Achieving | N/A | 31.9% | 25.4% |
| A1c <7.0% | % Achieving | N/A | 52.2% | 46.5% |
| 2h PPG (mmol/L) | Baseline | 13.99 | 14.67 | 14.55 |
| | Change from baseline | -0.65 | -4.51 | -5.47 |
| Glucose excursion | Baseline | 4.72 | 5.45 | 5.25 |
| | Change from baseline | -0.67 | -3.77 | -4.36 |
| FPG (mmol/L) | Baseline | 8.91 | 9.17 | 9.02 |
| | Change from baseline | 0.19 | -0.68 | -0.89 |
| Serious TEAE | | 4.1% | 0.4% | |
| Nausea | | 4.1% | 24.2% | 20.2% |
| Hypoglycemia | | 1.6% | 1.7% | |

Source: Deutsche bank research., SNY

Bydureon also appears more effective vs. GSK's Syncria



- In a phase 2 trial, GSK's Syncria (albiglutide) demonstrated HbA1c reduction from -0.87 (100mg monthly) to -0.11 (4mg weekly).
 - While comparing across trials is not always accurate, this appears weaker to Bydurion's reduction (-1.5 to -1.9 mg reduction) at a similar time point
 - Phase 3 trials from Syncria are expected in 2011/2012

Title: 16 week data from Syncria's phase 2 trial

| | Placebo | Exenatide | | | | Albiglutide | | | | |
|-------------------------------------|---------|-------------------------|-------|-----------------|-------|-------------|-------------------|-------|------------------|--------|
| | | twice daily 5-10 mcg | 4 mg | Weekly 15 mg | 30 mg | 15 mg | Biweekly 30 mg | 50 mg | Monthly 50 mg | 100 mg |
| n (A1C data) | 50 | 34 | 34 | 34 | 29 | 30 | 32 | 34 | 35 | 33 |
| Baseline A1C (%) | 7.8 | 8 | 8.2 | 8 | 8 | 8.2 | 8 | 7.9 | 7.9 | 8.1 |
| Δ in A1C at 16 wks vs. baseline (%) | -0.17 | -0.54 | -0.11 | -0.49 | -0.87 | -0.56 | -0.79 | -0.79 | -0.55 | -0.87 |
| n (FPG data) | 47 | 33 | 32 | 32 | 29 | 28 | 32 | 32 | 34 | 33 |
| Baseline FPG (mmol/l) | 9.9 | 9.5 | 10.9 | 9.5 | 9.6 | 10.2 | 9.5 | 10 | 9.3 | 9.8 |
| FPG at 16 wks vs. baseline (%) | -0.10 | -0.8 | -0.47 | -0.72 | -1.44 | -1.28 | -1.58 | -1.32 | -0.72 | -1.22 |

Source: Deutsche bank research., GSK



SUMMARY: How we arrive at our \$3B in peak sales for Bydureon in 2020?

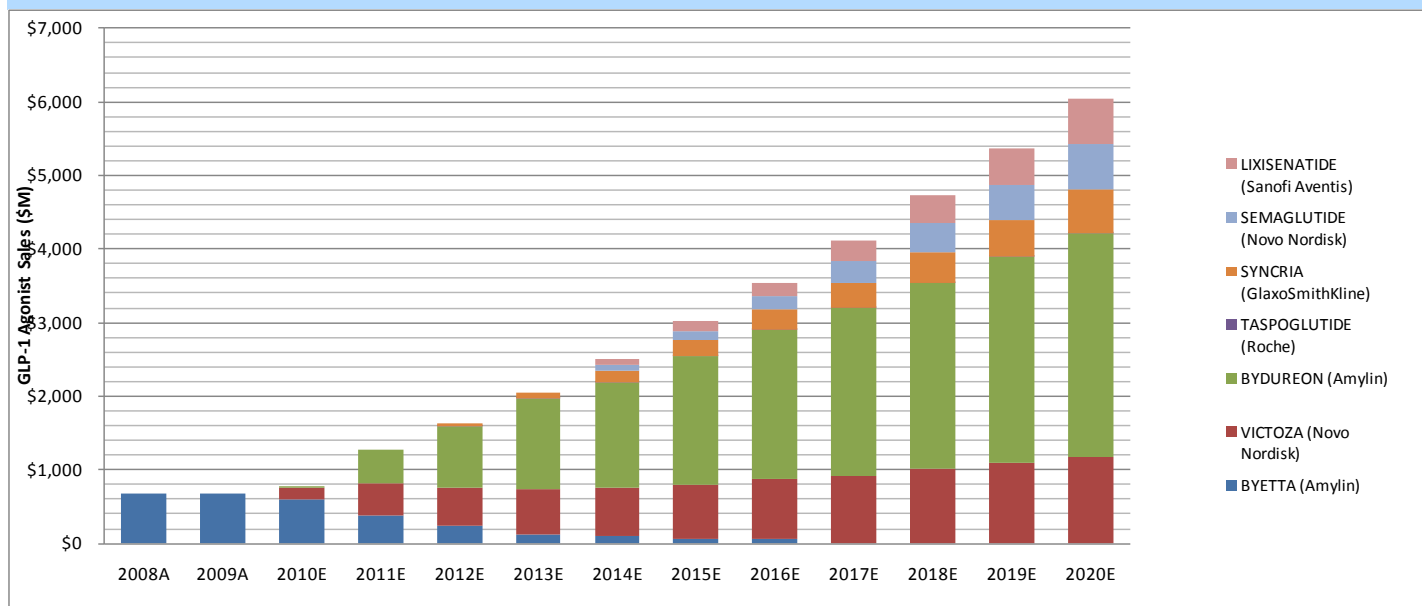
We estimate Bydureon sales reaching \$1.4B by 2014, \$3B by 2020



Key assumptions:

- Prevalence of diabetes continues to grow at a 3.5% CAGR. [CDC/Primary literature]
- Percent diagnosed increases from 73% to 80% in 2020. [CDC/Primary literature]
- Percent treated increases from 84% to 88% in 2020.[CDC/Primary literature]
- GLP-1 market share increases from 2%-3% to 5% in 2020 [PCP, ENDO data]
- Bydureon takes 50% of the market [PCP, ENDO data]
- Bydureon is priced at the average of both Victoza doses and all GLP-1 agonists undergo a 5% y/y price increase until 2020

DB-Bio projections for sales of GLP-1s & Bydureon





...We think this may be less likely for Amylin, given launch projections look achievable post approval...

Bydureon Consensus estimates vs. DB

| DB Estimates | 2010E | 2011E | 2012E | 2013E | 2014E | 10-'14 CAGR |
|----------------------------|-------------|--------------|--------------|----------------|----------------|-------------|
| Total Revenue | \$703 | \$957 | \$1,183 | \$1,472 | \$1,659 | 24% |
| Bydureon U.S. Sales | \$11 | \$456 | \$833 | \$1,226 | \$1,435 | 241% |
| Non-GAAP EPS | (\$0.01) | \$0.21 | \$0.60 | \$1.24 | \$1.91 | |
| GAAP EPS | (\$0.95) | (\$0.72) | (\$0.33) | \$0.37 | \$0.99 | |
| PE | -1760 | -30 | -64 | 57 | 22 | |
| Mkt Cap/Revenue | 4.4 | 3.2 | 2.6 | 2.1 | 1.9 | |
| Consensus | 2010E | 2011E | 2012E | 2013E | 2014E | |
| Total Revenue | \$713 | \$963 | \$1,202 | \$1,509 | \$1,816 | 26% |
| Bydureon U.S. Sales | \$21 | \$447 | \$852 | \$1,214 | \$1,483 | 189% |
| Non-GAAP EPS | (\$0.66) | (\$0.47) | \$0.24 | \$0.69 | \$1.28 | |
| GAAP EPS | (\$1.07) | (\$0.64) | (\$0.16) | \$0.30 | \$0.87 | |
| PE | -32 | -33 | -134 | 71 | 25 | |
| Mkt Cap/Revenue | 4.3 | 3.2 | 2.6 | 2.0 | 1.7 | |
| DB vs. Consensus | 2010E | 2011E | 2012E | 2013E | 2014E | |
| Total Revenue | -1.4% | -0.6% | -1.6% | -2.4% | -8.7% | |
| Bydureon U.S. Sales | -50.6% | 1.9% | -2.2% | 1.0% | -3.2% | |
| GAAP EPS | -11.2% | 13.1% | 108.0% | 24.8% | 14.2% | |

Source: Deutsche Bank, First Call



Valuation & Scenario analyses for Bydureon

Amylin (AMLN) – Valuation & Sensitivites



We created four scenarios around GLP-1 market size:

- We use DCF analysis for our valuation.
- All assume a 2% terminal value (that is the rate we expect cash flows to continue to grow at after 2020 with a low generic risk)
- All assume 12.2% discount rate (in line with WACC)
- **All scenarios assume Bydureon takes 50% market share**

| | DCF Value | Scenario Description |
|------------|-----------|-----------------------------|
| Super Bear | \$6.87 | GLP-1 Gains No Market Share |
| Bear Case | \$18.24 | GLP-1 Share: 2.5% to 4% |
| BASE CASE | \$27.45 | GLP-1 Share: 2.5% to 5% |
| Super Bull | \$44.72 | GLP-1 Share: 2.5% to 7.5% |

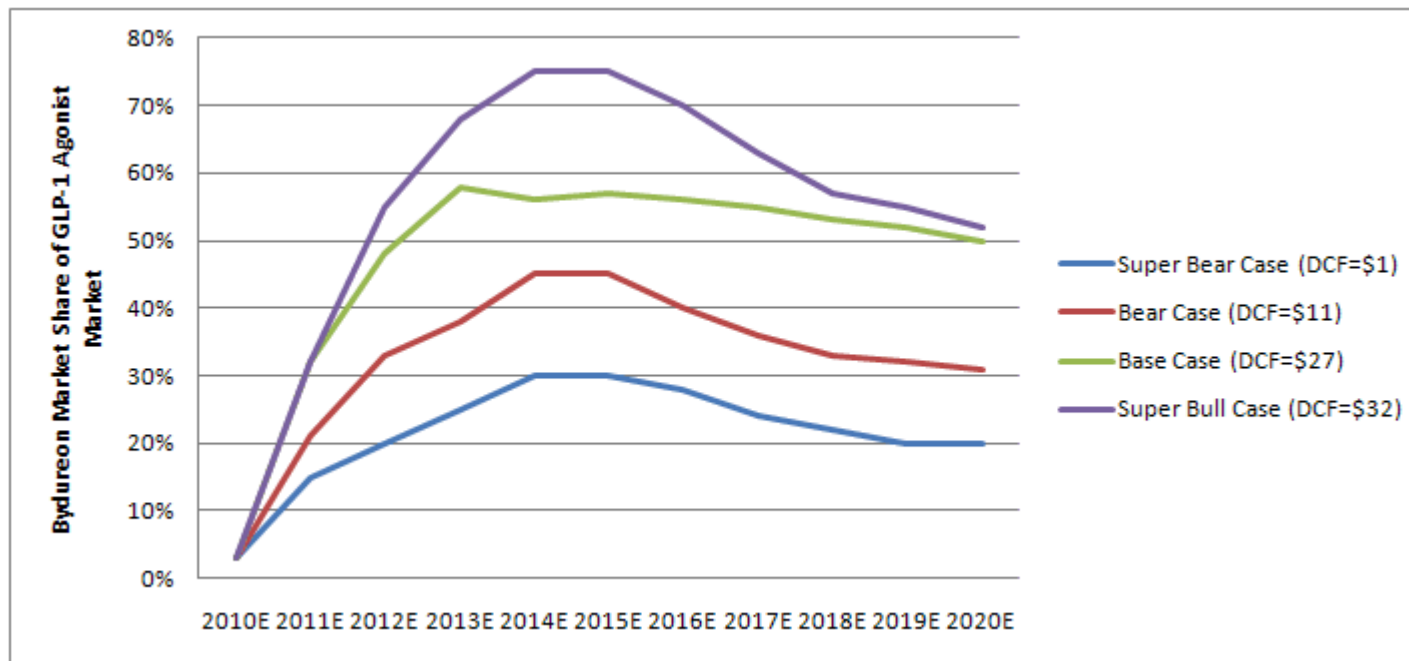
Source: Deutsche bank research



Amylin (AMLN) – Valuation & Sensitivites

Sensitivites around Bydureon peak share: because of high COGS of Bydureon, share is critical to valuation

- **OUR BASE CASE** assumes Bydureon takes 50% market share → fair valuation of **~\$27/share**
- SUPER BEAR: If Bydureon only takes 20% share by 2020 → fair valuation estimated at \$1/share
- BEAR CASE: If Bydureon only takes 30% share by 2020 → fair valuation is estimated at \$11/share
- SUPER BULL CASE: If Bydureon takes more than 50% share → fair valuation is estimated at \$32/share



ASSUMPTIONS FOR THIS ANALYSIS

- We use DCF analysis for our valuation.
- All assume a 2% terminal value (that is the rate we expect cash flows to continue to grow at after 2020 with a low generic risk)
- All assume 12.2% discount rate (in line with WACC)

Source: Deutsche bank research



Post-approval we *could* see brief stock weakness as the sell-side adjusts for lower margins with Bydureon

We believe the street is incorrectly modeling COGS

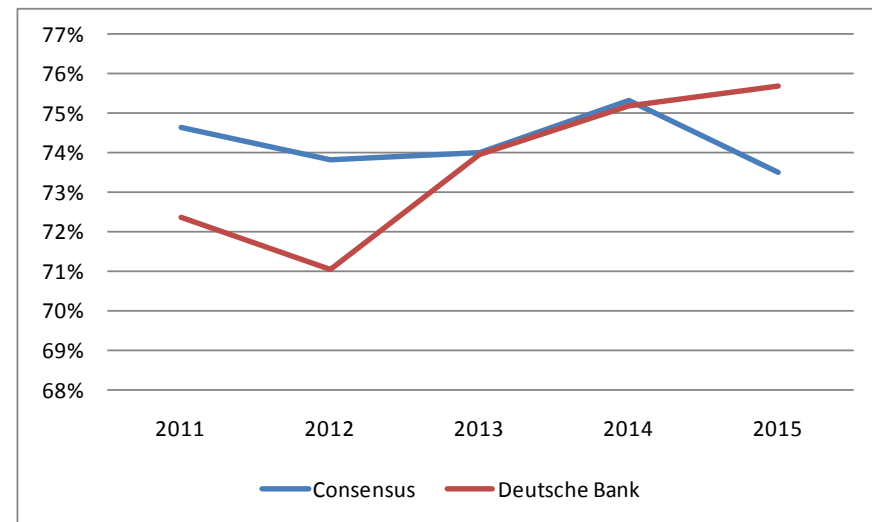


Expenses may have to come up, which could create weakness post launch

- Initially, Bydureon gross margins could be as low as 55%-65%
 - Combined w/ Byetta margins of 90% and Symlin margins of 75-80% we see Amylin gross margins to be lower vs. consensus.
- Gross margins for the overall business will run to 75% when economies of scale are realized with Bydureon
 - Amylin has guided that its target gross margins on Bydureon to be ~75% (much lower than Byetta's 90%).

Gross margin analysis: Consensus vs. DB

| | 2011 | 2012 | 2013 | 2014 | 2015 |
|------------------------|------------|------------|------------|------------|------------|
| Consensus | | | | | |
| Bydureon Sales | \$447 | \$853 | \$1,214 | \$1,483 | \$1,634 |
| Byetta Sales | \$369 | \$171 | \$93 | \$56 | \$68 |
| Symlin Sales | \$97 | \$106 | \$107 | \$113 | \$129 |
| Total Product Rev | \$914 | \$1,130 | \$1,414 | \$1,652 | \$1,830 |
| COGS | \$231 | \$296 | \$368 | \$407 | \$485 |
| % of Total Product Rev | 25% | 26% | 26% | 25% | 26% |
| Gross Margin | 75% | 74% | 74% | 75% | 74% |
| DB Estimates | | | | | |
| Bydureon Sales | \$456 | \$833 | \$1,226 | \$1,435 | \$1,747 |
| Byetta Sales | \$369 | \$231 | \$125 | \$95 | \$68 |
| Symlin Sales | \$91 | \$94 | \$96 | \$99 | \$102 |
| Total Product Rev | \$957 | \$1,183 | \$1,472 | \$1,659 | \$1,956 |
| COGS | \$253 | \$335 | \$377 | \$404 | \$466 |
| % of Total Product Rev | 28% | 29% | 26% | 25% | 24% |
| Gross Margin | 72% | 71% | 74% | 75% | 76% |

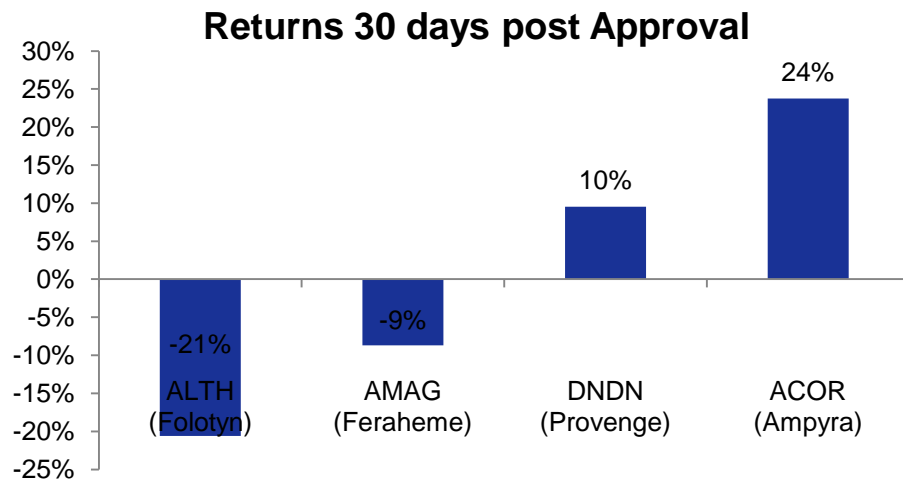


Source: Deutsche bank research

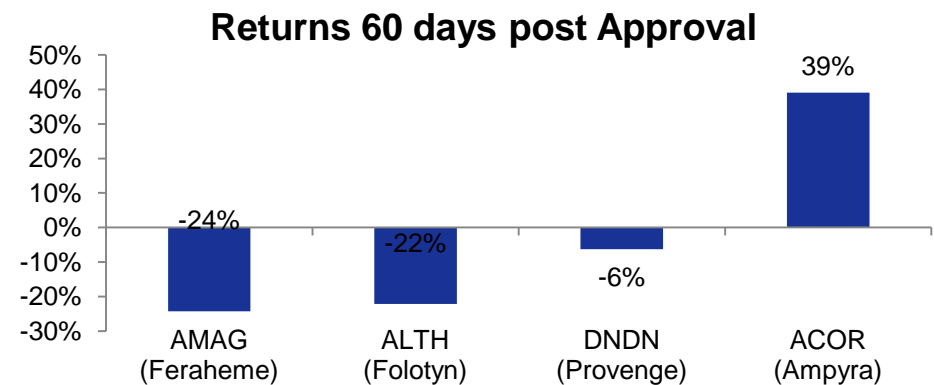


While post approval many stocks tend to trade down...

Comparison of stock returns following FDA approval



Source: Deutsche bank research and capital IQ



Source: Deutsche bank research and capital IQ



Why a take out could unlock Bydureon's true value

Amylin (AMLN) – One of the purest take out plays in biotech (1)



Why we are discussing M&A

- In April 2009, the New York Times reported that activist investor, Carl Ichan (controls 9% of Amylin shares), suggested that Amylin sell itself to partner, Eli Lilly.
- Since then, there has been significant market discussion regarding the acquisition of Amylin by a large-cap pharmaceutical with interest in the diabetes arena.



Amylin (AMLN) – One of the purest take out plays in biotech (2)

Reasons why Amylin could be acquired

1. High COGS require Bydureon to be a blockbuster for value generation (streamlining expenses becomes important to its profitability)
2. We believe right acquirer could produce synergies of ~\$15-\$17 per share
3. Icahn partners have one seat on AMLN board – Has history of selling biotechs
4. As patent cliff looms over several pharma majors, Bydureon seems lucrative
5. U.S. footing - Many have paid significant premiums for traction in the U.S
6. AMLN-LLY standstill provision prevents hostile takeover by Lilly while allowing a friendly deal

Amylin (AMLN) – One of the purest take out plays in biotech (3)



Amylin & Takeda make the MOST sense according to our analysis

| Company | LLY | Takeda | GSK |
|--------------------------------|----------------|----------------|----------------|
| Potential Synergies | | | |
| Change to Amylin Total Revenue | 3% | 5% | 1% |
| Change to Amylin COGS | 0% | 0% | 0% |
| Change to Amylin R&D | -50% | -50% | -50% |
| Change to Amylin SG&A | -70% | -70% | -50% |
| Change to Amylin Cap Ex | 0% | 0% | 0% |
| Tax Rate of Acquirer | 22% | 31% | 28% |
| Value to Acquirer | \$44.38 | \$42.78 | \$36.82 |
| Additional Value to DCF | \$16.93 | \$15.33 | \$9.37 |

| Company | LLY | Takeda | GSK | Merck | BMJ | AZN |
|-------------------------|-----|--------|-----|-------|-----|-----|
| US Diabetes sales force | Yes | Yes | Yes | Yes | Yes | Yes |
| Do they have GLP-1? | Yes | No | Yes | No | No | No |
| Do they have DPP-IV? | No | Yes | No | Yes | Yes | Yes |
| Patent Cliff | Yes | Yes | Yes | Yes | Yes | Yes |
| Cost to borrow | 4% | 2% | 5% | 3% | 6% | 6% |

Source: Deutsche Bank



Summary/Valuation

Amylin (AMLN) -Buy



- Rating: Buy
- Price target: \$27

Valuation

One Year price target: \$27

Current stock price: ~\$21

Methodology: DCF

- \$1.4B 2014 sales
- \$3.0B in peak sales (2020)
- 12.2% discount rate (in line with WACC)
- 2% terminal growth rate (low generic risk)

Risks

Poor Bydureon launch

Failure of the FDA to approve Bydureon

Bydureon has unforeseen safety signal post launch.

| | DCF Value | Scenario Description | Probability Assigned | Weighted DCF Value |
|------------|-----------|-----------------------------|----------------------|--------------------|
| Super Bear | \$6.87 | GLP-1 Gains No Market Share | 5% | \$0.34 |
| Bear Case | \$18.24 | GLP-1 Share: 2.5% to 4% | 15% | \$2.74 |
| BASE CASE | \$27.45 | GLP-1 Share: 2.5% to 5% | 70% | \$19.21 |
| Super Bull | \$44.72 | GLP-1 Share: 2.5% to 7.5% | 10% | \$4.47 |
| | | TOTAL | 100% | \$26.77 |

Source: Deutsche Bank, First Call



Questions???

Appendix 1

Important Disclosures

Additional Information Available upon Request



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| Company | Ticker | Price | Disclosure |
|---------|---------|-------|------------|
| AMLN | AMLN.OQ | 21.10 | 2,6 |

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Robyn Karnauskas



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Buy: Based on a current 12-month view of total shareholder return (TSR = percentage change in share price from current price to projected target price plus projected dividend yield), we recommend that investors buy the stock.

Sell: Based on a current 12-month view of total shareholder return, we recommend that investors sell the stock.

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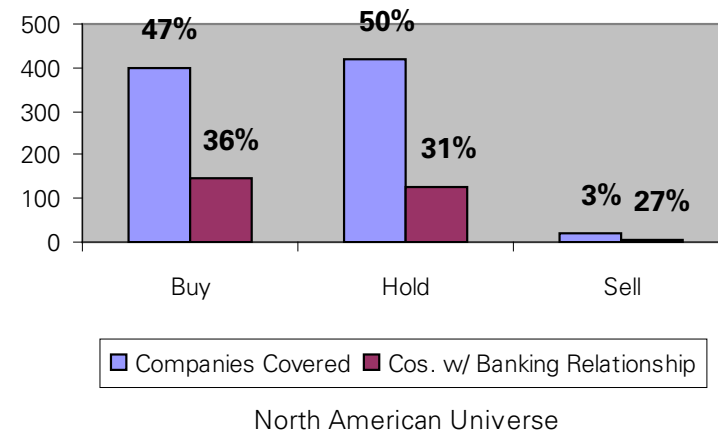
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Equity Rating Dispersion and Banking Relationships





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