Dulaglutide has Higher Adherence and Persistence than Semaglutide and Exenatide QW: 6-month Follow-up from US Real-World Data

> Reema Mody¹, Maria Yu¹, Bal Nepal², Manige Konig¹, Michael Grabner²

¹Eli Lilly and Company, Indianapolis, USA, ²HealthCore Inc., Wilmington, USA



PRESENTER DISCLOSURE

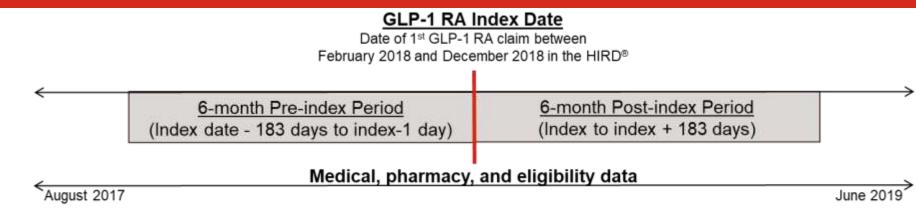
Reema Mody

Employee of Eli Lilly and owns stock in the company.

OBJECTIVE

The objective of this retrospective real-world observational study was to compare 6-month adherence and persistence among patients initiating once-weekly glucagon-like peptide-1 receptor agonists (GLP-1 RAs), dulaglutide vs semaglutide or dulaglutide vs exenatide BCise pen, in the US.

STUDY DESIGN



Key Inclusion and Exclusion Criteria

- Included patients (age ≥18 years) with T2D initiating once weekly dulaglutide, semaglutide, or exenatide BCise from the HIRD®
- Excluded patients with claim for any GLP-1 RA, or fixed combination of GLP-1 RA and insulin anytime, diagnosis of secondary diabetes or T1D during the 6month pre index period

Outcome Measures

- Adherence measured by proportion of days covered (PDC), defined as the number of days with drug on-hand divided by the number of days in the specified time interval (6-month follow-up period for this study); adherent patients were those with PDC ≥80%
- Persistence measured by length of continuous therapy; persistent patients were those with continuous therapy from the point of initiation until the end of the follow-up period, allowing for a maximum gap of 45 or 60 days from the date the previous fill's supply ran out to the next fill

Statistical Methods

- Propensity score, defined as probability of being initiated with index drug, was calculated using logistic regression with relevant demographics and baseline characteristics as factors. Propensity score 1-1 matching was used to adjust for treatment selection bias
- Kaplan-Meier plot and Cox Proportional Hazard model were used to examine medication persistence

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Abbreviations: GLP-1 RA = glucagon-like peptide-1 receptor agonist; HIRD = HealthCore Integrated Research Database; T1D = type 1 diabetes; T2D = type 2 diabetes
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BASELINE CHARACTERISTICS POST-MATCHING

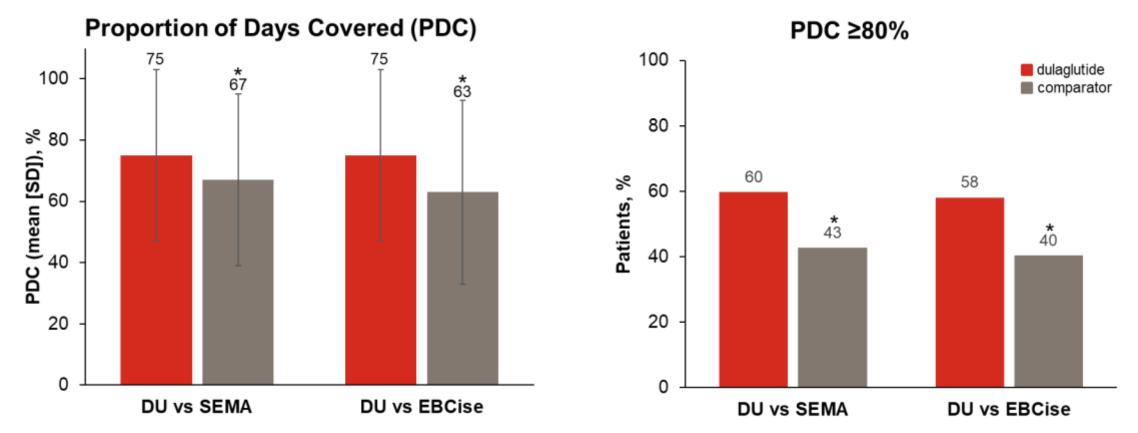
Characteristics	Matched DU (N = 3,852)	Matched SEMA (N = 3,852)	Std. Diff	Matched DU (N = 1,879)	Matched EBCise (N = 1,879)	Std. Diff
Sex, Female (%) ^a	51.6	50.9	0.01	48.4	48.4	0.00
Age, years, Mean (SD) ^a	53.5 (9.8)	53.6 (9.6)	0.01	54.8 (10.1)	54.8 (10.2)	0.00
aDCSI score, Mean (SD) ^b	0.9 (1.3)	0.8 (1.3)	0.05	0.9 (1.3)	0.8 (1.3)	0.05
Selected comorbidities (%) ^b						
Cardiovascular diseases	14.1	14.1	0.00	14.7	14.7	0.00
Dyslipidemia	71.8	73.5	0.04	70.7	73.6	0.06
Hypertension	73.1	73.9	0.02	74.0	73.0	0.02
Obesity	36.9	38.2	0.03	30.8	31.1	0.01
Antidiabetic medication use	(%) ^b					
Insulin	31.9	32.1	0.00	29.9	28.6	0.03
SGLT2 inhibitors	27.1	29.2	0.05	24.3	26.3	0.05
DPP-4 inhibitors	26.5	25.4	0.03	25.6	25.8	0.00

The two propensity score matched cohorts were well balanced for dulaglutide vs semaglutide and dulaglutide vs exenatide BCise comparisons.

^aDemographic characteristics were evaluated on index date; ^bClinical characteristics were assessed over the 6 month pre-index period. Abbreviations: aDSCI = adapted Diabetes Complications Severity Index; DPP-4 inhibitors=dipeptidyl peptidase-4 inhibitors; DU = dulaglutide; EBCise = exenatide BCise; SGLT2 = sodium-glucose co-transporter-2; Std. Diff=Standardized difference. Std. diff of ≤0.10 was used to indicate cohort balance.

KEY RESULT

At 6 months follow-up, patients initiating dulaglutide had significantly higher medication adherence and a greater proportion of adherent patients compared to patients initiating semaglutide or exenatide BCise



*p<0.001 vs dulaglutide from t-test (continuous) or chi-square(categorical). Adherent patients were those with PDC \geq 80%. Abbreviations: DU = dulaglutide; EBCise = exenatide BCise; PDC = proportion of days covered; SD = standard deviation; SEMA = semaglutide

ADHERENCE BY SUBGROUPS

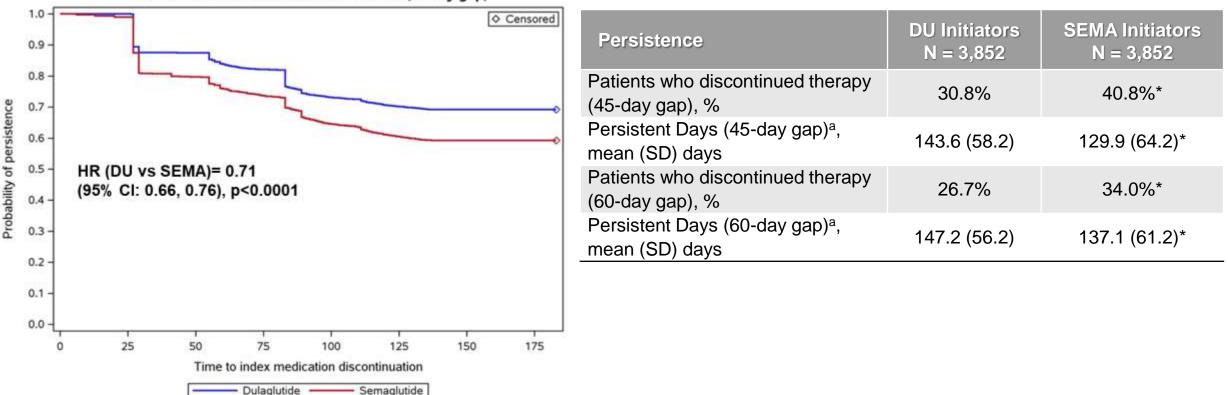
At 6 months follow-up, the % adherent in different patient subgroups were higher with dulaglutide compared to patients initiating semaglutide or exenatide BCise

Subgroups		DU Initiators		SEMA Initiators		DU Initiators		EBCise Initiators	
		Adherent	Ν	Adherent	Ν	Adherent	Ν	Adherent	
Age									
<65 years	3,492	59.5%	3,492	42.8%	1,614	58.1%	1,614	40.7%	
≥65 years	360	61.7%	360	41.4%	265	58.5%	265	37.7%	
Index dose									
low	2,986	61.3%	2,986	43.1%	1,232	60.2%			
high	866	53.9%	866	41.5%	647	54.3%			
Dosing pattern							No dose		
low dose only (DU 0.75 mg; SEMA 0.25/0.5 mg)	2,007	53.4%	2,297	37.3%	842	52.7%	calculations - only		
high dose only (DU 1.5 mg; SEMA 1.0 mg)	835	53.8%	778	40.8%	630	54.0%	1 dose available		
low dose to high dose	965	77.8%	675	62.5%	372	76.3%			
all others	45	60.0%	102	47.1%	35	68.6%			
BL use of insulin									
with insulin	1,227	57.1%	1,237	41.9%	561	55.6%	538	40.7%	
without insulin	2,625	60.9%	2,615	43.1%	1,318	59.2%	1,341	40.1%	

PDC ≥80% during 6 month follow-up was classified as "adherent". Abbreviations: BL = baseline; DU = dulaglutide; EBCise = exenatide BCise; PDC = proportion of days covered; SEMA = semaglutide

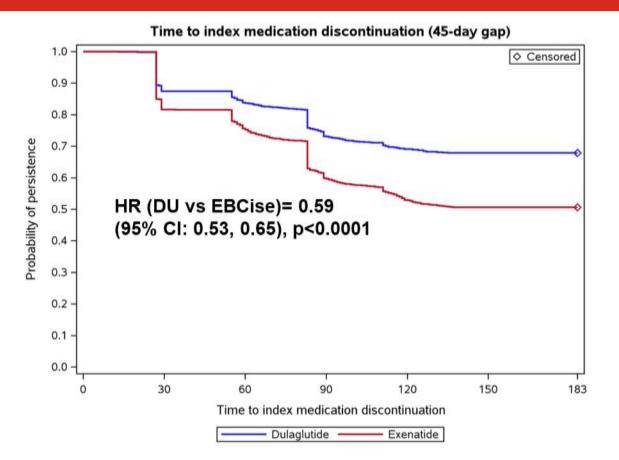
PERSISTENCE/DISCONTINUATION RESULTS – DU VS SEMA

Time to index medication discontinuation (45-day gap)



*p<0.001 vs dulaglutide. ^aPersistent days is the number of days from initiation to discontinuation of medication or end of follow-up period. Persistent patients were those with continuous therapy from the point of initiation until the end of the follow-up period, allowing for a maximum gap of 45 or 60 days from the time the previous fill run out to the next fill; patients with a gap between fills greater than 45 or 60 days were considered as "discontinued". Abbreviations: CI = confidence interval; DU = dulaglutide; HR = hazard ratio; SEMA = semaglutide

PERSISTENCE/DISCONTINUATION RESULTS – DU VS EQW



Persistence	DU Initiators N = 1,879	EBCise Initiators N = 1,879
Patients who discontinued therapy (45-day gap), %	32.1%	49.4%*
Persistent Days (45-day gap) ^a , mean (SD) days	142.0 (58.4)	121.4 (62.3)*
Patients who discontinued therapy (60-day gap), %	27.7%	45.4%*
Persistent Days (60-day gap) ^a , mean (SD) days	146.0 (56.5)	124.1 (62.0)*

*p<0.001 vs dulaglutide. ^aPersistent days is the number of days from initiation to discontinuation of medication or end of follow-up period. Persistent patients were those with continuous therapy from the point of initiation until the end of the follow-up period, allowing for a maximum gap of 45 or 60 days from the time the previous fill run out to the next fill; patients with a gap between fills greater than 45 or 60 days were considered as "discontinued". Abbreviations: CI = confidence interval; DU = dulaglutide; EBCise = exenatide BCise; HR = hazard ratio

LIMITATIONS

- Certain patient characteristics (such as socioeconomic status and education) that may be associated with outcomes of interest were not available for the study
- Limitations common to claims study exist (e.g. a claim for medication does not mean medication was taken as directed; claims for diagnosis code may be incorrectly coded; limited generalizability beyond those on commercial insurance)

CONCLUSION

At 6 months follow-up, a significantly higher proportion of propensity matched patients initiating dulaglutide were adherent and persistent to their treatment compared to patients initiating either semaglutide or exenatide BCise pen.



POSTER LAYOUT

^{928-P} Dulaglutide has Higher Adherence and Persistence than Semaglutide and Exenatide QW: 6-month Follow-up from US Real-World Data

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OBJECTIVE

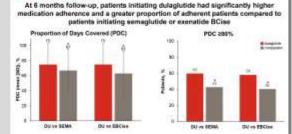
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- Excluded patients with any GUP-1 RA, or head combination of QLP-1 NA and maximum disperses of ascordan disperse or THE during the E-markhing an index partical Outcome Headwarms
- Addressing receiption by preparation of days invested IPSCs, defined as the surface of days with days in hand devided by the surface of days in the specified term menual IS-next theory ap people for the study, advance palants were there with PDC ARMs.
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- Addressements GLP-1 MA = glocogen His peptide-1 receptor agentet; HVPQ = HealthCone Integrated Research Delaterer; TVD = type 1 determin





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Baseline Characteristics Post-Matching

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Age, years, Mean (SD)*	111(6.0)	53.6 (9.8)	0.01	\$48,10(1)	548 (10.2)	0.06
#DCSI score, Mean (SD)*	8.9 (1.3)	0.6 (1.7)	0.05	0.0 (1.3)	0.8 11.00	0.05
Selected comprisitions (%)*						
Cardinoascelar diseases	54.1	34.1	0.00	14.7	34.7	D.00
Dysépidensia	71.8	73.5	0.04	79.7	73.4	0.04
Hypertension	78,1	73.8	0.02	74.0	73.0	0.00
Obesity	96.9	38.3	0.03	30.8	31.1	2.01
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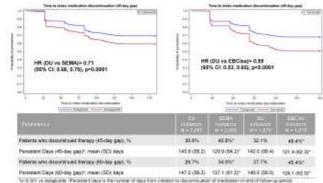
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Adherence by Subgroups

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index dose								
low .	1,900	01.3%	2,995	43.1%	1,222	85.2%		
nyn	888	53.8%	966	41.8%	047	84,3%		
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low close to high close	165	377.8%	875	62.5%	.372	76.9%		
allothers	45	00.0%	102	47.1%	36	68.0%		
BL use of insulin								
with intended	1,227	\$7.1%	1,237	41.0%		35.0%		40.7%
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At 6 months follow-up, the % adherent in different patient subgroups were higher with dulaglulide compared to patients initiating semaglulide or exenatide BCise.

Persistence/Discontinuation



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