Long- and short-term cost-effectiveness of once-weekly semaglutide versus dulaglutide for the treatment of type 2 diabetes in China: a hypothetical modeling exercise

Ying Hu[1#], Huimin Zou[2#], Yang Shen[3,4], Qi Ni[1], Yijun Li[1], Hao Zhang[5], Xianwen Chen[2,] Carolina Oi Lam Ung[2,6,7], Hao Hu[2,6,7]*, Yiming Mu[1]*

[1] Department of Endocrinology, First Medical Center of Chinese PLA General Hospital, Beijing, China

[2] State Key Laboratory of Quality Research in Chinese Medicine, Institute of Chinese Medical Sciences, University of Macau, Taipa, Macao

[3] School of Public Health, Peking University

[4] China Center for Health Development Studies, Peking University

[5] Novo Nordisk (China) Pharmaceuticals Co., Ltd., Beijing, China

[6] Centre for Pharmaceutical Regulatory Sciences, University of Macau, Taipa, Macao

[7] Department of Public Health and Medicinal Administration, Faculty of Health Sciences, University of Macau, Taipa, Macao

[#] Ying Hu and Huimin Zou share co-first authorship.

* Hao Hu (haohu@um.edu.mo) and Yiming Mu (muyiming@301hospital.com.cn) are joint corresponding authors.

Table S1. Baseline population characteristics

Characteristics	Value	Source
Demographics		
Age, years	55.67	SUSTAIN 7 (2018) [1]
Diabetes duration, years	7.42	SUSTAIN 7 (2018) [1]
Female, %	44.79	SUSTAIN 7 (2018) [1]
Smoker, %	14.01	SUSTAIN 7 (2018) [1]
Biomarkers		
HbA_{1c}, %	8.22	SUSTAIN 7 (2018) [1]
SBP, mmHg	132.96	SUSTAIN 7 (2018) [1]
TC, mmol/L	4.69[a]	Johansen et.al (2019) [2]
HDL, mmol/L	1.16[a]	Johansen et.al (2019) [2]
LDL, mmol/L	2.65[a]	Johansen et.al (2019) [2]
TG, mmol/L	2.05[a]	Johansen et.al (2019) [2]
BMI, kg/m^2	33.5	SUSTAIN 7 (2018) [1]
HR, bpm	75.19	SUSTAIN 7 (2018) [1]
WBC,$1x10^6$	7.39	SUSTAIN 7 (2018) [1]
eGFR, $mL/min/1.73m^2$	97.20	SUSTAIN 7 (2018) [1]

[a]: Values have been converted from mg/dL to mmol/L by multiplying the mg/dL values with 0.0259 (TC, HDL, LDL) and 0.0113 (TG).

Table S2. Costs and utility of complications, adverse events, and patient characteristics related to type 2 diabetes

Variables	Cost			Utility	
	Event cost	State cost	Source	Utility data	Source
Background treatment	3,387	-	Xie et al. (2008) [3]	-	-
Complications and adverse events					
Background retinopathy	15,931	917	He et al. (2019) [4]	-0.040	Hayes et al. (2013) [5]
Proliferative retinopathy	15,931	917	He et al. (2019) [4]	-0.070	Johansen et al. (2019) [2]
Macular edema	16,625	2,187	Wu et al. (2010) [6]	-0.040	Hayes et al. (2013) [5]
Proliferative retinopathy & macular edema	32,555	3,104	He et al. (2019) [4], Wu et al. (2010) [6]	-0.070	Pan et al. (2016) [7]
Severe visual loss	15,114	11,665	Deng et al. (2015) [8]	-0.074	Hayes et al. (2013) [5]
Symptomatic neuropathy	18,975	7,280	Deng et al. (2015) [8]	-0.084	Beaudet et al. (2014) [9]
Peripheral vascular disease	28,530	11,089	Wu et al.	-0.061	Beaudet et al.

			(2010) [6]		(2014) [9]
Lower extremity amputation	22,874	18,233	Wu et al. (2010) [6]	-0.280	Beaudet et al. (2014) [9]
Microalbuminuria	204	204	Men et al. (2020) [10]	0	Johansen et al. (2019) [2]
Macroalbuminuria	15,016	5,730	Deng et al. (2015) [8]	-0.048	Beaudet et al. (2014) [9]
End stage renal disease	160,138	128,793	Duan et al. (2020) [11]	-0.263	Deng et al. (2015) [8]
Ischemic heart disease	48,979	8,744	Su et al. (2019) [12]	-0.090	Pan et al. (2016) [7]
First myocardial infarction event	81,507	25,765	Deng et al. (2015) [8]	-0.055	Hayes et al. (2013) [5]
Subsequent myocardial infarction event	81,507	25,765	Deng et al. (2015) [8]	-0.0012	Johansen et al. (2019) [2]
First stroke event	32,275	15,966	Su et al. (2019) [12]	-0.164	Hayes et al. (2013) [5]
Subsequent stroke event	32,275	15,966	Su et al. (2019) [12]	-0.040	Johansen et al. (2019) [2]
Heart failure	39,048	20,715	Su et al.	-0.108	Hayes et al.

			(2019) [12]		(2013) [5]
Non-severe hypoglycemic event	889	0	Su et al. (2019) [12]	-0.014	Johansen et al. (2019) [2]
Severe hypoglycemic event	13,941	0	Su et al. (2019) [12]	-0.047	Johansen et al. (2019) [2]
Patient characteristics					
Per every 10 years increase in age	-	-	-	-0.024	Johansen et al. (2019) [2]
Female	-	-	-	-0.093	Johansen et al. (2019) [2]
Per every additional 10 years of diabetes	-	-	-	-0.016	Johansen et al. (2019) [2]
Per unit increase in BMI over 25	-	-	-	-0.006	Johansen et al. (2019) [2]

Table S3. Incidences and costs of adverse events in the cost-of-control model

Adverse events (per 100 person-year)	**Incidences**			**Treatment Costs (2023, CNY)**
	O.W. semaglutide 0.5mg	**O.W. semaglutide 1.0mg**	**Dulaglutide 1.5mg**	
Nausea	62	83.2	45.4	0
Diarrhea	33.8	41.6	31.6	20.62
Vomiting	21.8	20.8	16.8	20.62
Decreased appetite	11.1	11.7	15.1	0.00
Headache	15	13	12.6	20.62
Nasopharyngitis	6.8	6.9	10.1	206.24
Upper respiratory tract infection	8.1	4.8	8.8	247.90
Constipation	7.7	6.1	7.6	5.16
Non-severe hypoglycemic event	0.01	0.03	0.01	889.30
Severe hypoglycemic event	0.00	0	0.008	13941.22

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