Comparable glycaemic control and hypoglycaemia outcomes in adult patients with type 2 diabetes (T2D) initiating insulin glargine 300 U/mL (Gla-300) vs insulin degludec (IDeg) in real-world clinical practice: DELIVER Naïve D study Nicholls C; Gupta R; Meron A; Wu J; Westerbacka J; Bosnyak Z

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In this retrospective, observational study, electronic medical records from the Predictive Health Intelligence Environment database (IBM Explorys, US) were analysed (1/3/2015–31/3/2018) to compare real-world clinical outcomes in insulin-naïve adults with T2D initiating Gla-300 or IDeg. Before propensity score matching (PSM), 1277 patients initiating Gla-300 and 653 patients initiating IDeg were eligible. After PSM, baseline demographics and clinical characteristics were similar in matched groups (Gla-300, N=638; IDeg, N=638). Mean HbA1c reductions were similar between matched Gla-300 and IDeg groups (1.67% vs 1.58%, respectively; P=0.51), as was attainment of HbA1c target <7.0% (23.82% vs 27.43%; P=0.20) and <8.0% (55.02% vs 57.05%; P=0.63). At 6 months' fixed follow-up, adjusting for baseline hypoglycaemia as a covariate, the incidences of all hypoglycaemia (ICD 9/10 and/or plasma glucose ≤3.9 mmol/L; Gla-300: 10.34% vs IDeg: 11.13%; P=0.75) and hypoglycaemia associated with an inpatient/emergency department (ED) encounter (2.04% vs 2.51%; P=0.42) were similar. With variable follow-up, incidences of all hypoglycaemia (adjusted hazard ratio [aHR] 1.02; P=0.93) and inpatient/ED hypoglycaemia (aHR 0.84; P=0.67) were similar between the groups, as were event rates of all hypoglycaemia (rate ratio 0.88; P=0.33) and inpatient/ED hypoglycaemia (rate ratio 0.63; P=0.15). Discontinuation rates were similar in the Gla-300 and IDeg groups (29.15% vs 32.60%; aHR 0.86; P=0.14). This analysis shows that initiation of Gla-300 or IDeg resulted in similar improvements in glycaemic control, with comparable hypoglycaemia outcomes and discontinuation rates, in a real-world clinical setting in insulin-naïve adults with T2D, consistent with findings from a previous head-to-head randomised controlled trial. Supported by: Sanofi