

# The effect of dapagliflozin on HbA1c and weight after its addition to commonly prescribed dual combination diabetes medication regimes in people with type 2 diabetes in a real-world UK setting: the ABCD nationwide dapagliflozin audit

M Yadagiri(1), P Sen Gupta(1), A.Kennedy(2), T Pang(3), L Balamuri(4), T Robinson(5), S Bain(6), IW Gallen(7), K Adamson(8), REJ Ryder(1), the ABCD nationwide dapagliflozin audit contributors(9)

(1) Sandwell and West Birmingham Hospital NHS Trust, Birmingham, (2) Antrim Area Hospital, Antrim, (3) Dudley Group of Hospitals, Dudley, (4) Chorley and South Ribble Hospital, Lancashire, (5) Royal United Hospital, Bath, (6) Abertawe Bro Morgannwg University NHS Trust, Swansea, (7) Royal Berkshire NHS Trust, Reading, (8) West Lothian NHS Trust, Edinburgh, (9) Various hospitals and health centres, various towns, UK

## Background

The ABCD audits new pharmacotherapies for diabetes across the UK to collect real-world data on their usage, accelerate the understanding of new agents in patients in the UK and also to ascertain whether experience from clinical use matches phase 3 trial data.

## Aims

To evaluate the effect on HbA1c and weight after adding dapagliflozin to commonly prescribed dual combination diabetes medication regimes in people with type 2 diabetes in a real-world UK setting.

## Methods

The ABCD nationwide audit of dapagliflozin in real clinical use in the UK, was launched in October 2014. Anonymised data of patients treated with dapagliflozin in the UK was collected by an online password protected questionnaire:

- Patient demographics
- HbA1c, weight, BMI, Systolic BP
- Diabetes medications
- Adverse events

ABCD members as well as clinicians in both primary care and secondary care were emailed to invite them to submit clinical data on their patients treated with dapagliflozin.

Data Input	Oct 2014 – Dec 2016
Centres	59
Contributors	156
Number of patients	2182

Those with baseline and follow-up HbA1c within a median (range) of 6.2(4.1-9.4) months, after commencing dapagliflozin were included. Data at baseline and first follow-up were compared using student's paired t-test.

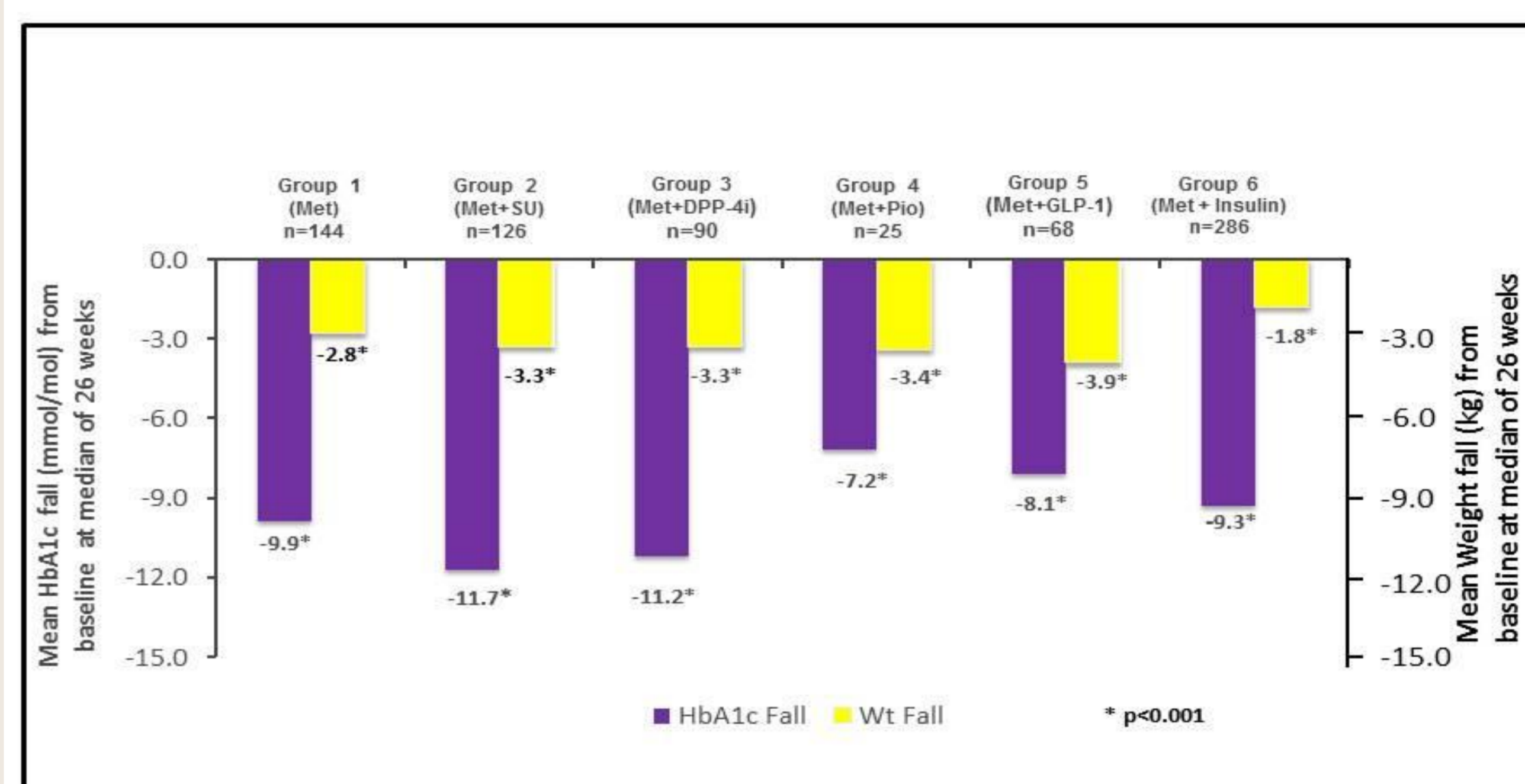
## Baseline Characteristics

Patients were categorized into 6 groups according to their other diabetes therapies, dapagliflozin was added to: group 1 (metformin, n=144), group 2 (metformin and

Groups	Gr 1	Gr 2	Gr 3	Gr 4	Gr 5	Gr 6
Age(years)	54.4±10.3	59.0±9.9	55.1±10.7	55.4±10.5	56.7±9.0	57.4±9.6
Sex(Males %)	47.9	57.9	50	76	51.5	54.5
T2DM Dur(years)	6.3±6.2	7.9±5.3	7.7±5.3	9.6±3.8	8.7±5.6	11.4±8.6
Weight(Kg)	101.7±26.6	99.0±23.6	91.7±20.0	95.9±28.5	110.8±21.9	105.5±19.5
BMI(Kg/m <sup>2</sup> )	35.0±7.8	35.1±9.9	33.1±7.6	31.7±7.3	39.2±8.4	36.9±8.3
HbA1c(mmol/mol)	77.4±16.2	80.0±15.3	73.7±16.9	67.9±18.0	81.2±17.5	81.3±15.5

sulphonylurea, n=126), group 3 (metformin and dipeptidyl peptidase-4 inhibitor(DPP4-i), n=90), group 4(metformin and pioglitazone, n=25), group 5 (metformin and glucagon-like peptide-1 receptor agonist(GLP-1), n=68) and group 6 (metformin and insulin, n=286).

## Results



Follow-up HbA1c was at median (range) of 6.4(4.3-9.7) months. Of 739 patients, mean(±SE) HbA1c fell by 9.9(±1.2)mmol/mol from 77.4(±1.3) to 67.5(±1.5)mmol/mol, n=144 in group 1; 11.7(±1.1)mmol/mol from 80.0(±1.3) to 68.3(±1.3)mmol/mol, n=126 in group 2; 11.2(±1.5)mmol/mol from 73.7(±1.7) to 62.5(±1.7)mmol/mol, n=90 in group 3; 7.2(±1.5)mmol/mol from 67.9(±3.6) to 60.7(±3.8)mmol/mol, n=25 in group 4; 8.1(±2.3)mmol/mol from 81.1(±2.1) to 73.0(±2.1)mmol/mol, n=68 in group 5 and 9.3(±0.8)mmol/mol from 81.3(±0.9)mmol/mol to 72.0(±0.9)mmol/mol, n=286 in group 6 (p<0.001 all groups). In corresponding groups, weight fell by 2.8(±0.5)kg from 101.7(±2.2) to 98.9(±2.1)kg, 3.3(±0.4)kg from 99.0(±2.0) to 95.7(±2.0)kg, 3.3(±0.4)kg from 91.7(±2.1) to 88.3(±2.0)kg, 3.4(±0.4)kg from 95.9(±5.4) to 92.5(±5.3)kg, 3.9(±0.4)kg from 110.8(±2.6) to 106.8(±2.4)kg and 1.8(±0.3)kg from 105.5(±1.1) to 103.6(±1.1)kg (p<0.001 all groups).

## Conclusion

Dapagliflozin is effective in improving glycaemic control and reducing weight as adjunctive therapy to all commonly prescribed dual combination medication regimes for type 2 diabetes irrespective of varying baseline characteristics.

## Acknowledgement

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