



**Wiltshire**  
**Clinical Commissioning Group**

# GP learning event

Prescribing Incentive Scheme  
Think Kidney

6<sup>th</sup> June 2019

*'The right healthcare for you, with you, near you.'*



WORKING  
FOR  
CARERS

# 2019-20 Plans

## No Change

Budget Setting

Incentive  
Payment

## Change

### Gateway Criteria

- POD 50p per pt (after 12 months)
- Clinical projects (4 areas)

# Clinical Projects

DOACs

DPP4i

High Dose  
Opioids

Free  
choice

# Think Kidney

**D A M N drugs**



- Dose titration as a function of GFR / CrCl / Creatinine levels

# Clinical Projects

DOACs

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# DOACs

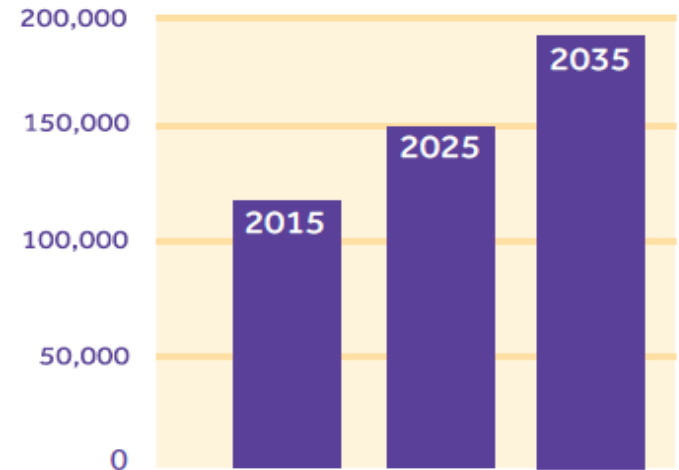


Often, DOACs are forever... **BUT!**

# Stroke prevention - Anticoagulation

- Incidence of Stroke in UK is rising
- Programs to
  - Increase detection of AF
  - Offer preventative treatment:  
*“Don’t wait to anticoagulate”*
- Anticoagulation costs rising
- Currently ~£6m on DOACs in Wiltshire alone
  - Annual growth: 25%

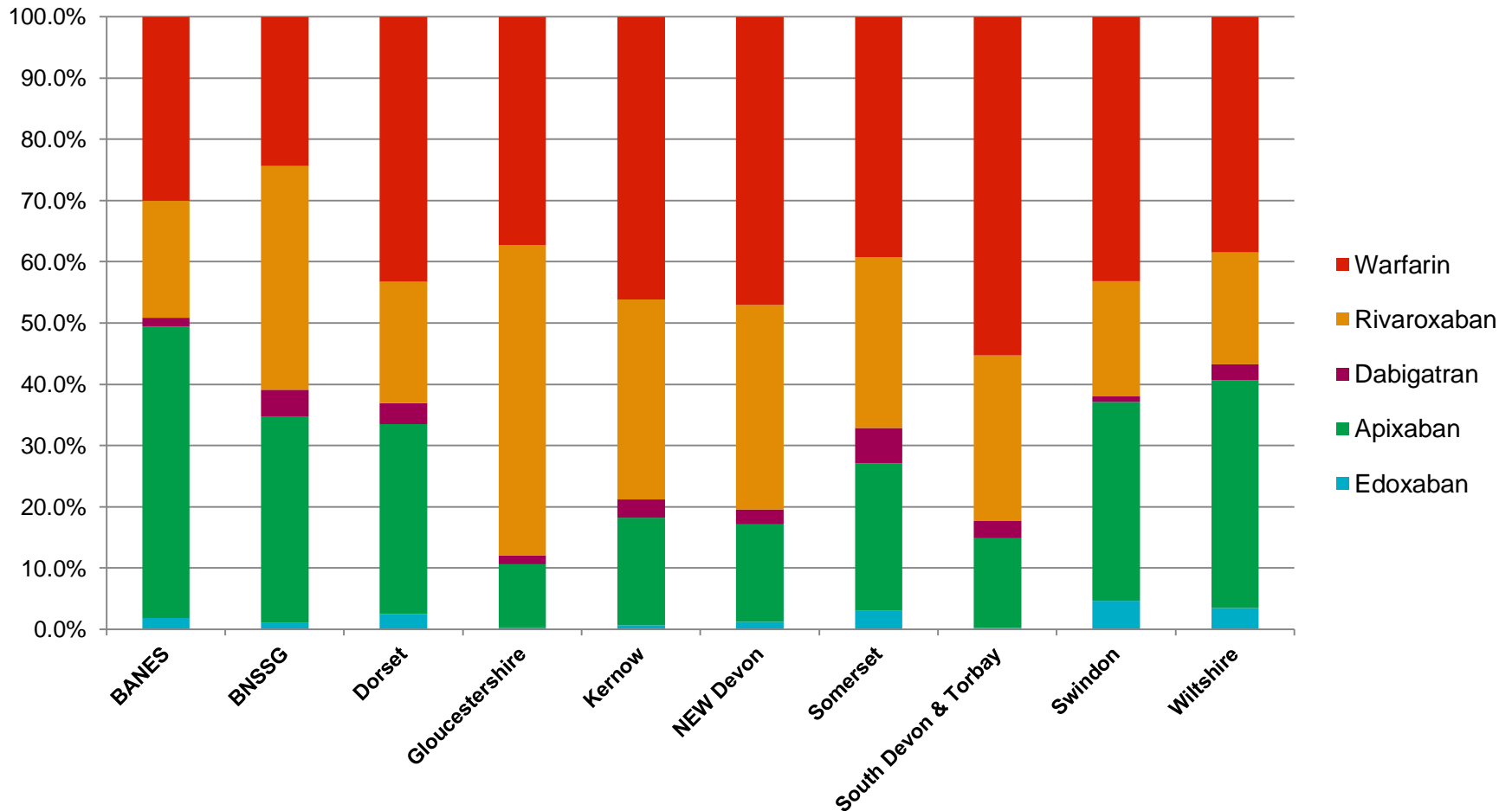
Stroke incidence (number of people)



[https://www.stroke.org.uk/system/files/sotn\\_2018.pdf](https://www.stroke.org.uk/system/files/sotn_2018.pdf)

# Anticoagulant choice in SW

## SW DOAC Prescribing data 2018/19 to Dec 18





# Creatinine clearance

	Dabigatran dose?	Rivaroxaban dose?	Edoxaban dose?	What's the apixaban dose?
<b>CrCl &gt; 95 mL/min</b>	150 mg bid	20 mg daily	Avoid use	Use 5 mg bid, EXCEPT... Use 2.5 mg bid if patient has 2 or more of these factors: ≥80 years old, creatinine ≥ 133 umol/L, weight <60 kg>≤ 60 kg
<b>CrCl &gt;50 - 95 mL/min</b>			60 mg daily	
<b>CrCl &gt;30-50 mL/min</b>		15 mg daily	30 mg daily	
<b>CrCl 15 - 30 mL/min</b>	75 mg bid			
<b>CrCl &lt;15 mL/min</b>	Avoid use	Avoid use	Avoid use	

# Indication

## AF vs DVT/PE

### Apixaban (Second Line DOAC)

- Tablets 2.5mg, 5mg
- To treat DVT or PE: Dose 10 mg twice a day for the first 7 days, then 5 mg twice a day for at least 3 months. For prevention of recurrent disease, **people who have completed 6 months of treatment for DVT or PE should take 2.5 mg twice a day**. See SPC or NICE guidance
- NICE TA 341 Apixaban for the treatment and secondary prevention of deep vein thrombosis and / or pulmonary embolism June 2015

### Rivaroxaban

- 10mg Tablets, 20mg Tablets
- **For extended prevention of recurrent DVT** (following completion of at least 6 months therapy for DVT or PE), **the recommended dose is 10 mg once daily**. In patients with significant co-morbidities resulting in a higher risk of recurrent DVT or PE then the 20mg dose should be used.
- For the prevention of recurrent DVT and PE (following an acute DVT) in cancer patients. (LMWH still a treatment option)
- See [BCAP prescribing guidelines page](#)

# Help??

The screenshot displays a software interface for clinical reporting. On the left, a navigation pane shows a tree structure under 'All Reports (50295)'. The 'By Owner' section is expanded to show 'Arden's Ltd (14155)', which contains a 'Best Practice' folder. The 'Cardiovascular (268)' sub-folder is selected and highlighted. The main window, titled 'Cardiovascular', shows a list of 17 reports. The first report is selected and highlighted in blue. The reports are all '2. SA: ?Review DOAC + ...' type, with various criteria for renal function, age, and weight.

**All Reports (50295)**

- Waiting
- Completed
- Search reports...
- Favourites
- By Owner**
  - My Reports (130)
  - Local Reports (2484)
  - Arden's Ltd (14155)
    - Best Practice
      - Cancer (17)
      - Cardiovascular (268)**
      - Care Homes (9)
      - Dermatology (8)
      - Diabetes (121)
      - Endocrine (18)
      - Frailty and End of Life Care (63)

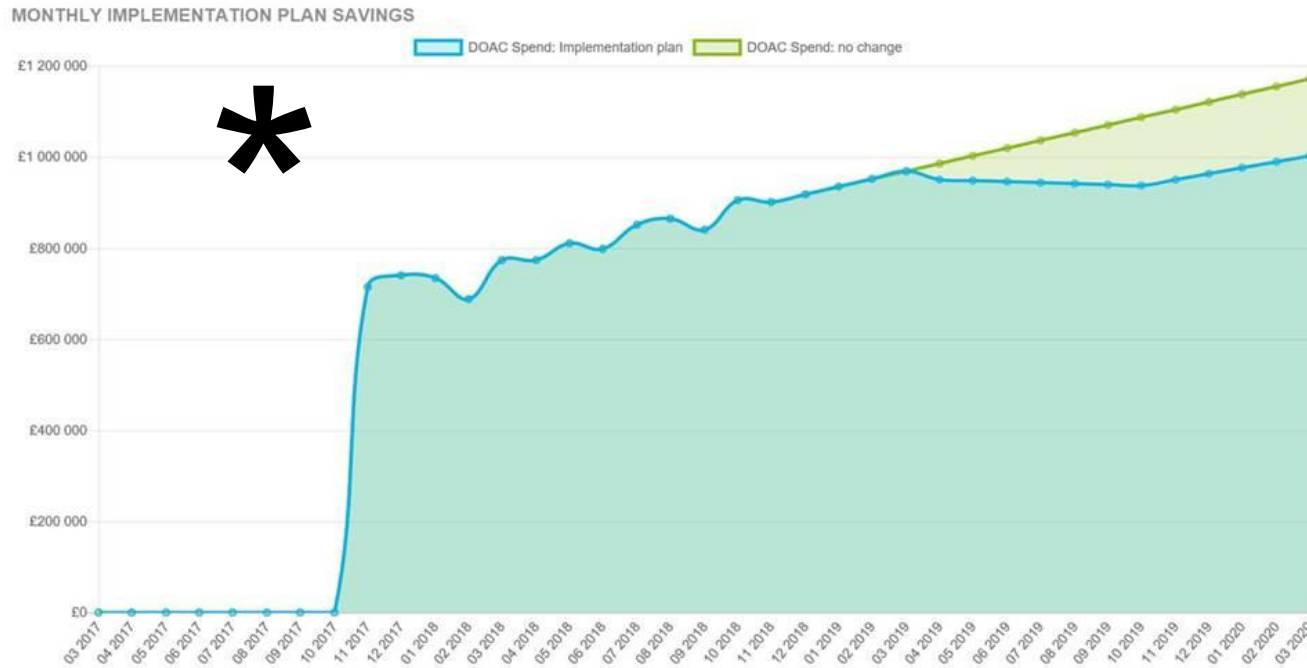
**Cardiovascular**

Name ▼

- 2. SA: ?Review DOAC + increase apixaban dose as CrCl >30 and 2 or more of <80yr + creatinine <133 + >60kg
- 2. SA: ?Review DOAC + increase dabigatran dose as CrCl >50 + <80y
- 2. SA: ?Review DOAC + increase edoxaban dose as CrCl >50 + >60kg
- 2. SA: ?Review DOAC + increase rivaroxaban dose as CrCl >50
- 2. SA: ?Review DOAC + reduce apixaban as 2 or more of >80yr + creatinine >133 + <60kg
- 2. SA: ?Review DOAC + reduce apixaban dose as CrCl 15-29
- 2. SA: ?Review DOAC + reduce dabigatran dose as >80y
- 2. SA: ?Review DOAC + reduce dabigatran dose as CrCl 30-49
- 2. SA: ?Review DOAC + reduce edoxaban dose as CrCl 15-50 or <=60kg
- 2. SA: ?Review DOAC + reduce rivaroxaban dose as CrCl 15-49
- 2. SA: ?Review DOAC + stop apixaban as CrCl <15
- 2. SA: ?Review DOAC + stop dabigatran as CrCl <30
- 2. SA: ?Review DOAC + stop edoxaban as CrCl <15
- 2. SA: ?Review DOAC + stop rivaroxaban as CrCl <15
- 2. SA: ?Review DOAC as no CrCl done in the last 13m
- 2. SA: ?Review DOAC as no FBC, UE or LFT in 12/12

# Edoxaban

- All DOACs on formulary
- Lack of head to head studies
- Most cost-effective DOAC (cheapest on DT + rebate)
  - New initiations



\* Data provided by Daiichi Sankyo

# Clinical Projects

DOACs

DPP4i

High Dose  
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# Diabetes

- DPP4 inhibitors (*-gliptins*)
- SGLT2 inhibitors (*-gliflozins*)

Clinical efficacy

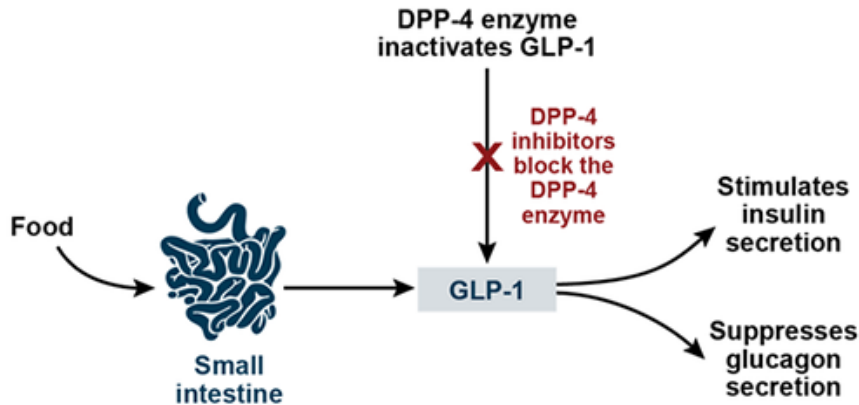
```
graph TD; A[Clinical efficacy] --> B[Choice]; B --> C[Dosage];
```

Choice

Dosage

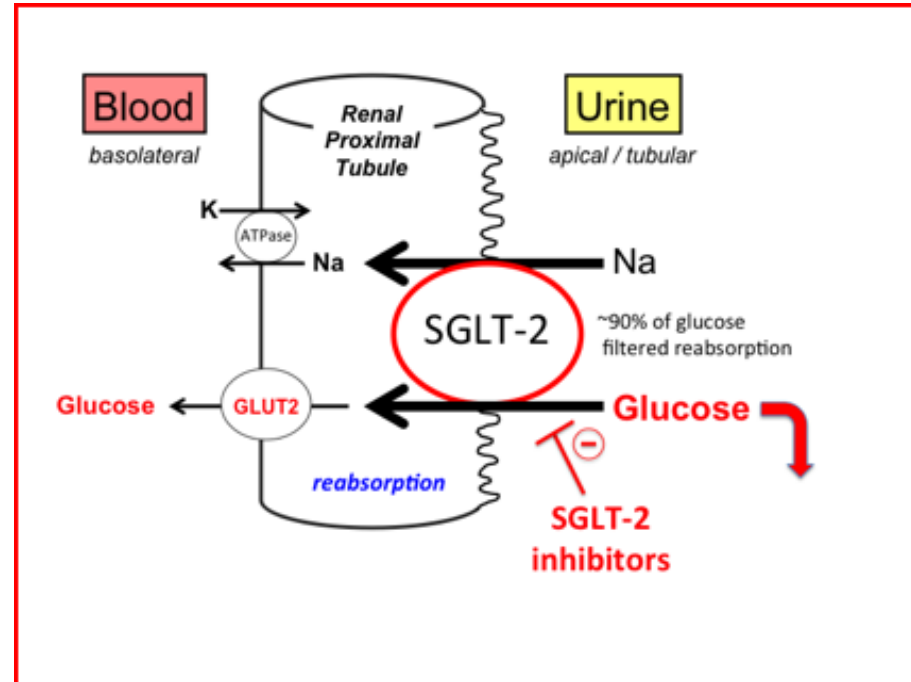
# Mechanisms of action

## DPP-4 Inhibitors Mechanism of Action



rucker DJ. *Diabetes Care*. 2007;30:1335-1343.

Average: 6-8 mmol reduction in HbA1c in 3-6m



Average: 5-8 mmol reduction in HbA1c in 6m

# Dosing considerations with available DPP-4 inhibitors

DPP-4 inhibitor	Degree of renal impairment*			
	Normal function (CrCl ≥90 ml/min)	Mild impairment (CrCl 50 to <80 ml/min)	Moderate impairment (CrCl 30 to <50 ml/min)	Severe impairment /ESRD (CrCl <30 ml/min)
Linagliptin	5 mg OD	5 mg OD	5 mg OD	5 mg OD
Sitagliptin	100 mg OD <sup>†</sup>	100 mg OD <sup>†</sup>	50 mg OD <sup>†</sup>	25 mg OD
Vildagliptin	50 mg BD (50 mg OD with an SU)	50 mg BD (50 mg OD with an SU)	50 mg OD	ESRD only if no dialysis 50 mg OD use with caution
Saxagliptin	5 mg OD <sup>†</sup>	5 mg OD <sup>†</sup>	2.5 mg OD <sup>†</sup>	2.5 mg OD <sup>†</sup> ESRD: not recommended
Alogliptin	25 mg OD <sup>†</sup>	25 mg OD <sup>†</sup>	12.5 mg OD <sup>†</sup>	6.25 mg OD <sup>†</sup> ESRD: use with caution





# Dosing considerations with available SGLT-2

Table 2. SGLT2-Inhibitor Dosing for Patients With Renal Dysfunction

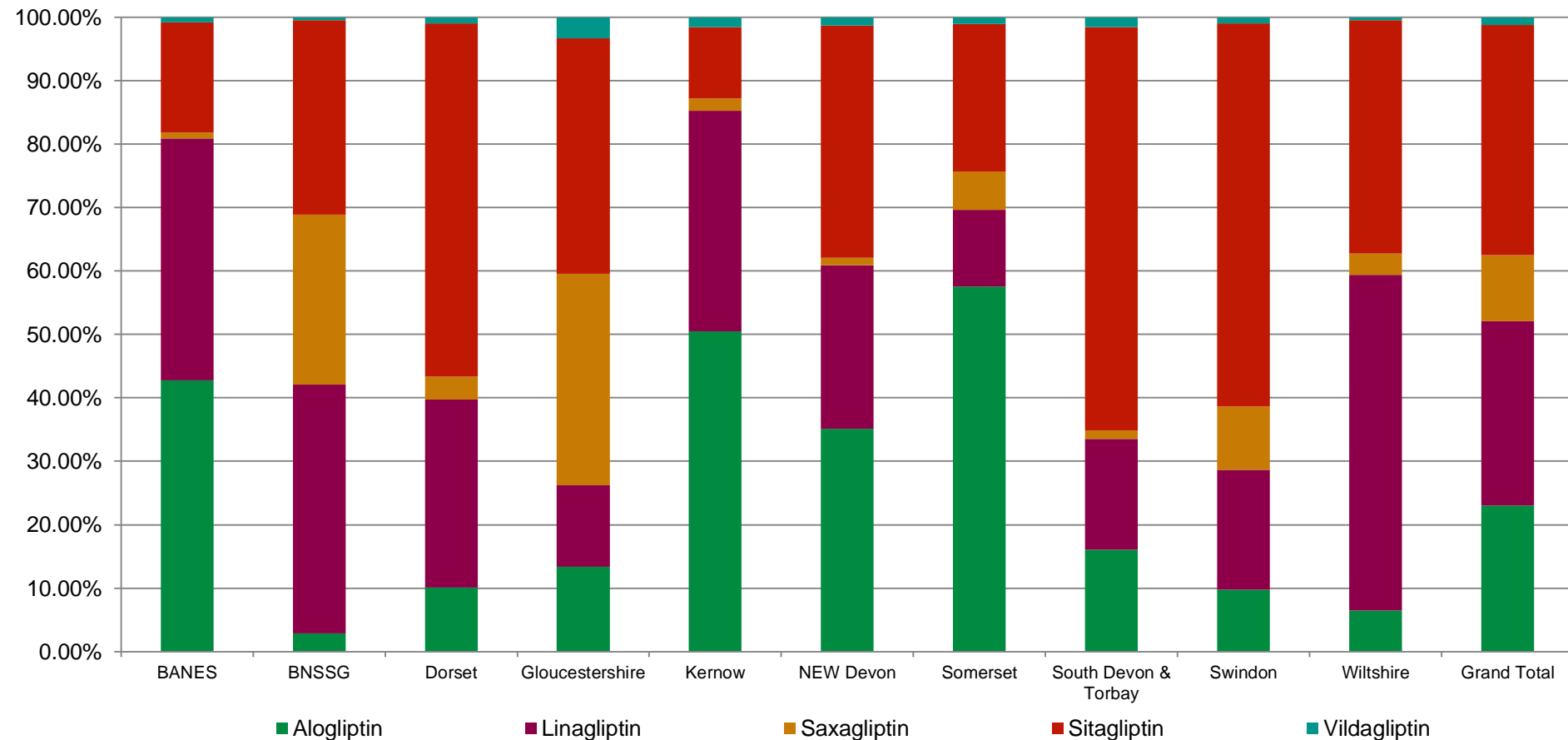
	Canagliflozin	Dapagliflozin	Empagliflozin
Starting dose	100 mg daily	5 mg daily	10 mg daily
Maximum dose	300 mg daily	10 mg daily	25 mg daily
Renal adjustment	eGFR 45-59: max 100 mg daily eGFR 30-44: not recommended eGFR <30: contraindicated	eGFR 30-60: not recommended eGFR <30: contraindicated	eGFR 30-45: not recommended eGFR <30: contraindicated

*eGFR: estimated glomerular filtration rate; SGLT2: sodium-glucose cotransporter 2.*

*Source: References 5-7.*

*\*Ertugliflozin is coming to UK market. No CV outcome data until autumn*

# DPPIV inhibitor choice



*Therapy with a DPP-4 inhibitor should only be continued if there has been a beneficial metabolic response i.e. a **reduction of at least 5mmol in HbA1c in 3 months.***  
*(BCAP prescribing guidelines)*

# Help?

The screenshot displays a software interface for clinical reporting. On the left is a navigation pane with a tree view under 'By Owner' containing 'Arden's Ltd (14155)' and 'Best Practice' with sub-items like 'Diabetes (121)'. The main area is titled 'Diabetes' and contains a list of 15 report entries, each starting with '2. SA: ?' followed by a clinical recommendation. A toolbar with various icons is located above the list.

**Diabetes**

Name ▾

- 2. SA: ?Increase alogliptin dose as 6.25mg on repeat + eGFR >30
- 2. SA: ?Increase saxagliptin dose as eGFR >60
- 2. SA: ?Increase sitagliptin dose as 25mg on repeat + eGFR >30
- 2. SA: ?Reduce alogliptin dose as eGFR <50
- 2. SA: ?Reduce saxagliptin dose as eGFR 15-59
- 2. SA: ?Reduce sitagliptin dose as eGFR <50
- 2. SA: ?Review alogliptin dose as 12.5mg on repeat + eGFR <30 or >49
- 2. SA: ?Review as HbA1c <42 (XaPbt) and on hypoglycaemic drug (Insulin, Meglitinide, SGLT2, Sulfonylurea)
- 2. SA: ?Review dapagliflozin + pioglitazone on repeat increase risk of bladder cancer
- 2. SA: ?Review Metformin as latest eGFR <30
- 2. SA: ?Review Metformin as no UE in last 12m
- 2. SA: ?Review Pioglitazone as has heart failure
- 2. SA: ?Review sitagliptin dose as 50mg on repeat + eGFR <30 or >49
- 2. SA: ?Stop DPP4 as on GLP1
- 2. SA: ?Stop saxagliptin dose as eGFR <15

# Clinical Projects

DOACs

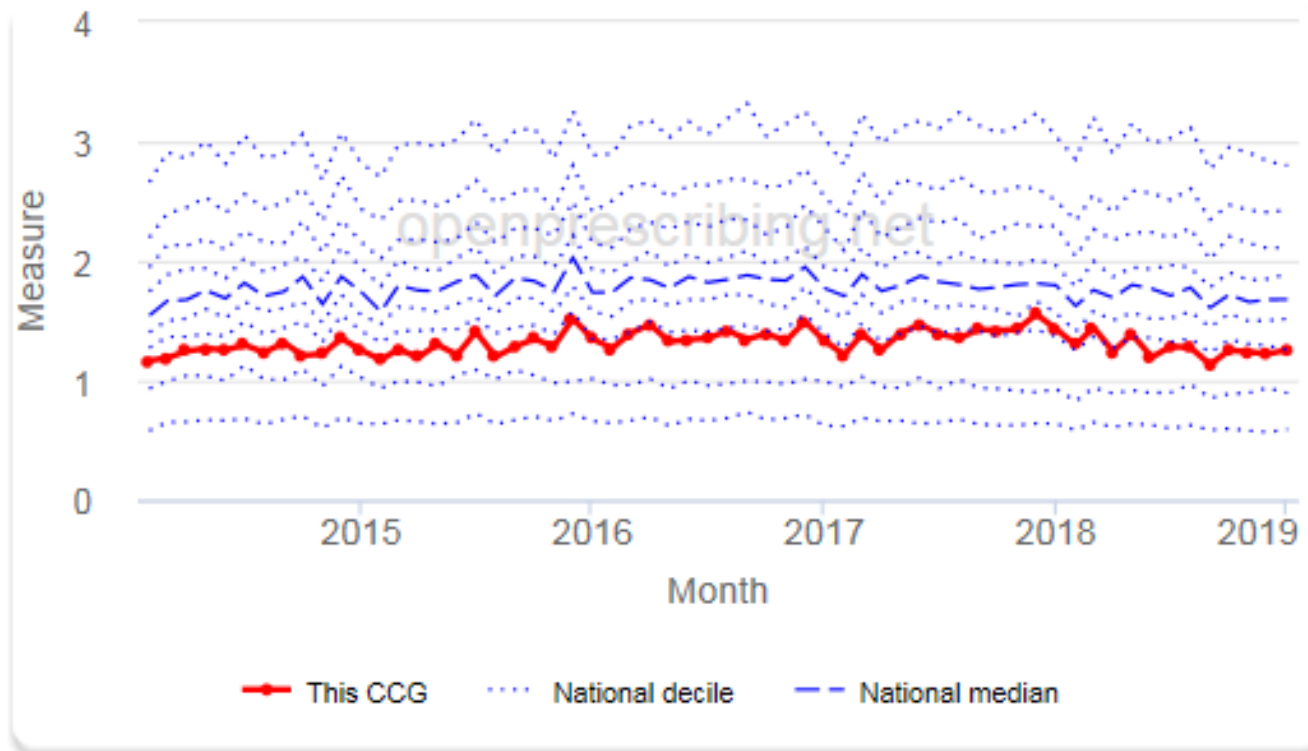
DPP4i

High Dose  
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# Opioids in Long-Term Pain

*Opioids with likely daily dose of  $\geq 120$ mg morphine equivalence per 1000 patients*



- Check your practice's trend on [www.openprescribing.net](http://www.openprescribing.net)