PCSK9 inhibitors: an analysis of current uptake and potential opportunities in England

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PCV98

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Background

- Cardiovascular disease (CVD) affects approximately 6 million people in England and costs the NHS an estimated £7 billion a year[1].
- A key risk factor for CVD is hypercholesterolaemia. PCSK9 inhibitors, such as alirocumab and evolocumab, are a treatment option for patients who, despite taking the maximum tolerated dose of statins, still have cholesterol higher than recommended levels[2,3].
- PCSK9 inhibitors have been shown to reduce cardiovascular outcomes in high-risk patients[4].
- In 2016, NICE published a report which estimated the number of people anticipated to receive PCSK9 inhibitors from 2016 - 2021[5].

Objectives

- This study compares actual prescription of PCSK9 inhibitors with expected use and considers opportunities for improved access to these drugs.

Methods

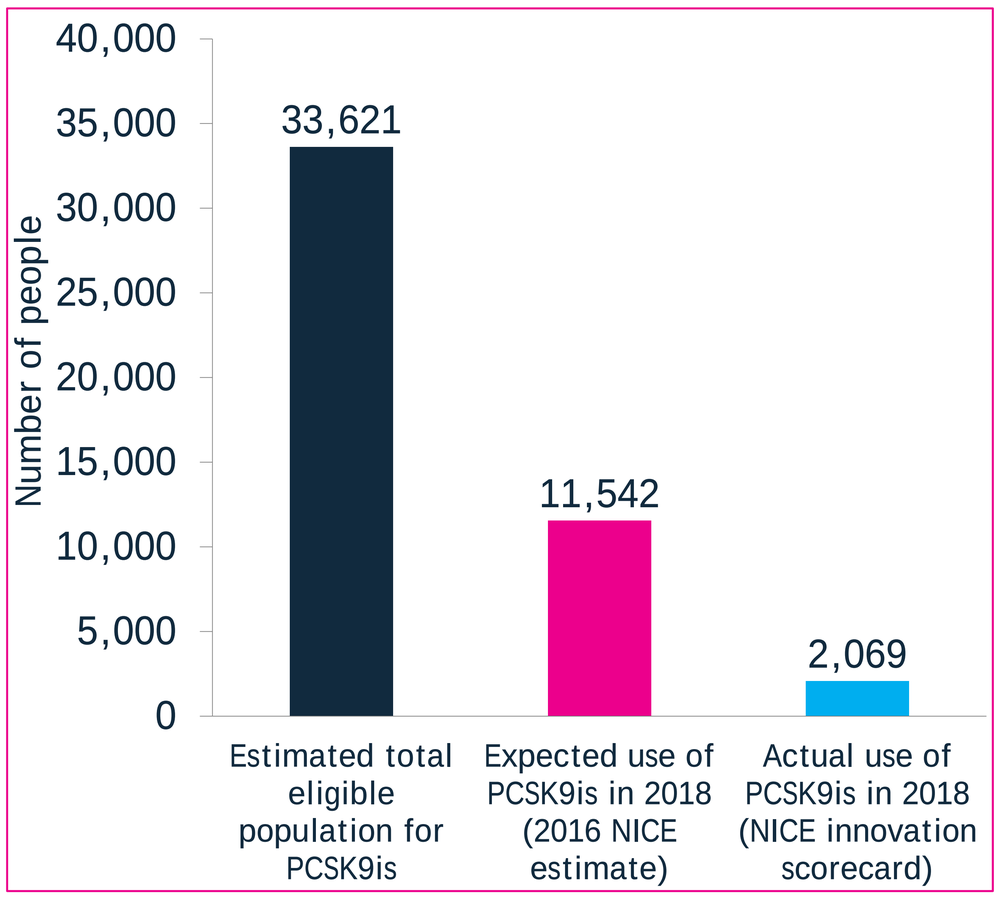
- An analysis of the initial expected uptake estimates from the NICE resource impact report for PCSK9 inhibitors and actual daily dose (ADD) prescribing data from the NICE innovation scorecard for the same drugs in 2018.
- The study included a review of the NICE technology appraisal guidance (TAG) for alirocumab (TA393) and evolocumab (TA394), and data from 2016–2019 relating to uptake of, and guidance associated with, PCSK9 inhibitors in England.

Table 1. *Calculation of actual use of PCSK9 inhibitors in the NHS in England*

Parameter	Value	Source
Actual use of PCSK9 inhibitors in 2018 compared to expected uptake		
Expected uptake of PCSK9 inhibitors in 2018	11,542	NICE resource impact template (2016)[5]
Observed ADD of PCSK9 inhibitors (July 2017 - June 2018)	755,806	NHS innovation scorecard (2019)[6]
Calculated actual use*	2,069	Calculation
Actual use in 2018 as a percentage of expected uptake	**18%**	**Calculation**
Actual use of PCSK9 inhibitors compared to estimated total eligible population		
Estimated total eligible population	33,621	NHS innovation scorecard (2019)[6]
Actual use in 2018 as a percentage of eligible population	**6%**	**Calculation**

*Observed ADD/365.25 – assumes that no patients discontinue treatment

Figure 1. *Expected vs. actual use of PCSK9 inhibitors*



Results

- On publication of the TAGs for alirocumab and evolocumab in 2016, NICE estimated that there would be 11,542 people receiving PCSK9 inhibitors by 2018[5].
- However, data from the NICE innovation scorecard[6] for 2018 shows that 755,806 ADDs of alirocumab and evolocumab were actually prescribed (Table 1).
- This is equivalent to approximately 2,069 people receiving treatment and indicates that uptake of PCSK9 inhibitors was 82% lower than expected in 2018 (Figure 1) and that approximately 6% of the total eligible population is receiving these drugs.

Conclusions

- **While there is considerable potential for PCSK9 inhibitors to alleviate some of the burden of CVD, prescription of these drugs is considerably lower than expected.**
- **Despite price reduction, the cost of PCSK9 inhibitors may remain the main barrier to access to these drugs.**
- **Further barriers could include a lack of clear guidance for clinicians, patient identification and, until recently, limited clinical trial data regarding CVD outcomes.**
- **New initiatives and opportunities, such as the selection of alirocumab and evolocumab as rapid uptake products by the Accelerated Access Collaborative[7], may ultimately lead to improved access to PCSK9 inhibitors.**

Disclosures

Tom Blaikie is an employee of OPEN VIE, London, UK.

References

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