

# Impact of unplanned dialysis on provision of vascular access in a regional dialysis unit over a one year period

Rees DO, Parker C, Davies P, Taylor S, Mikhail A

Department of Nephrology, Morriston Hospital, Swansea, UK



## Introduction

The use of arteriovenous grafts and temporary venous catheters are associated with increased morbidity, mortality and economic cost in comparison to arteriovenous fistulas (AVF).<sup>1,2</sup> One year survival of AVFs is approximately 90% in comparison to 60% for arteriovenous grafts.

To achieve optimal patient outcome the UK Renal Association strongly recommends, as a minimum audit standard, that 65% of all incident haemodialysis patients should commence dialysis with an AVF, and 85% of all prevalent patients should receive dialysis via an AVF.

## Aims

1. To determine whether compliance with guidelines for vascular access is achieved in a regional dialysis unit, and how compliance is affected when those presenting with established renal failure and known to the vascular access service for less than 90 days ('crash landers') are excluded.
2. To identify and examine why patients known to a nephrologist for greater than 90 days commenced dialysis with temporary venous access.

## Methods

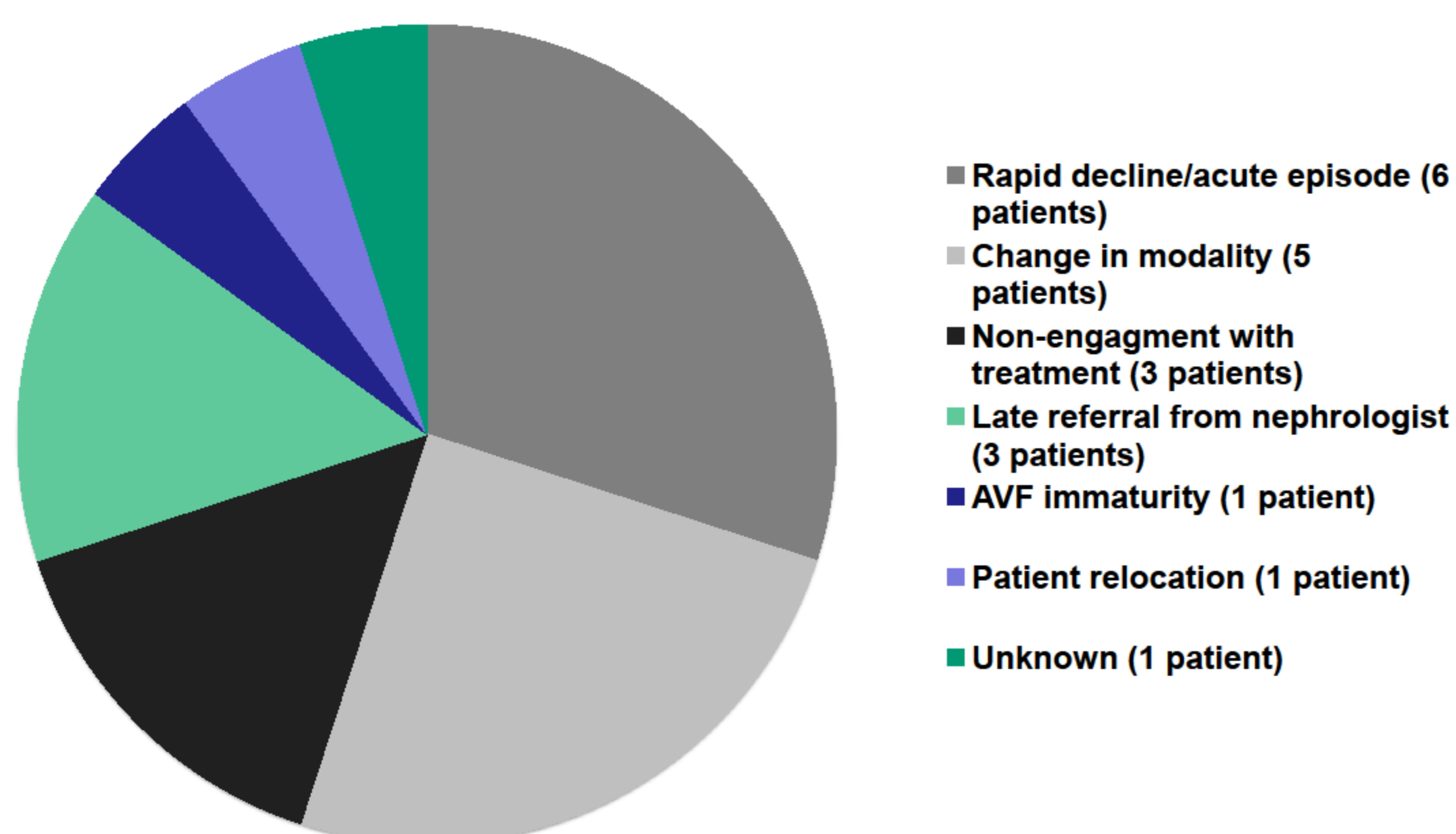
From an electronic database (VitalData) patients undergoing haemodialysis over a one year period between October 2012 and September 2013 were analysed. Total number of incident and prevalent patients per quartile, type of access and time of presentation to the vascular access service were collated. A root cause analysis was performed on patients commencing dialysis with temporary venous access.

## Results

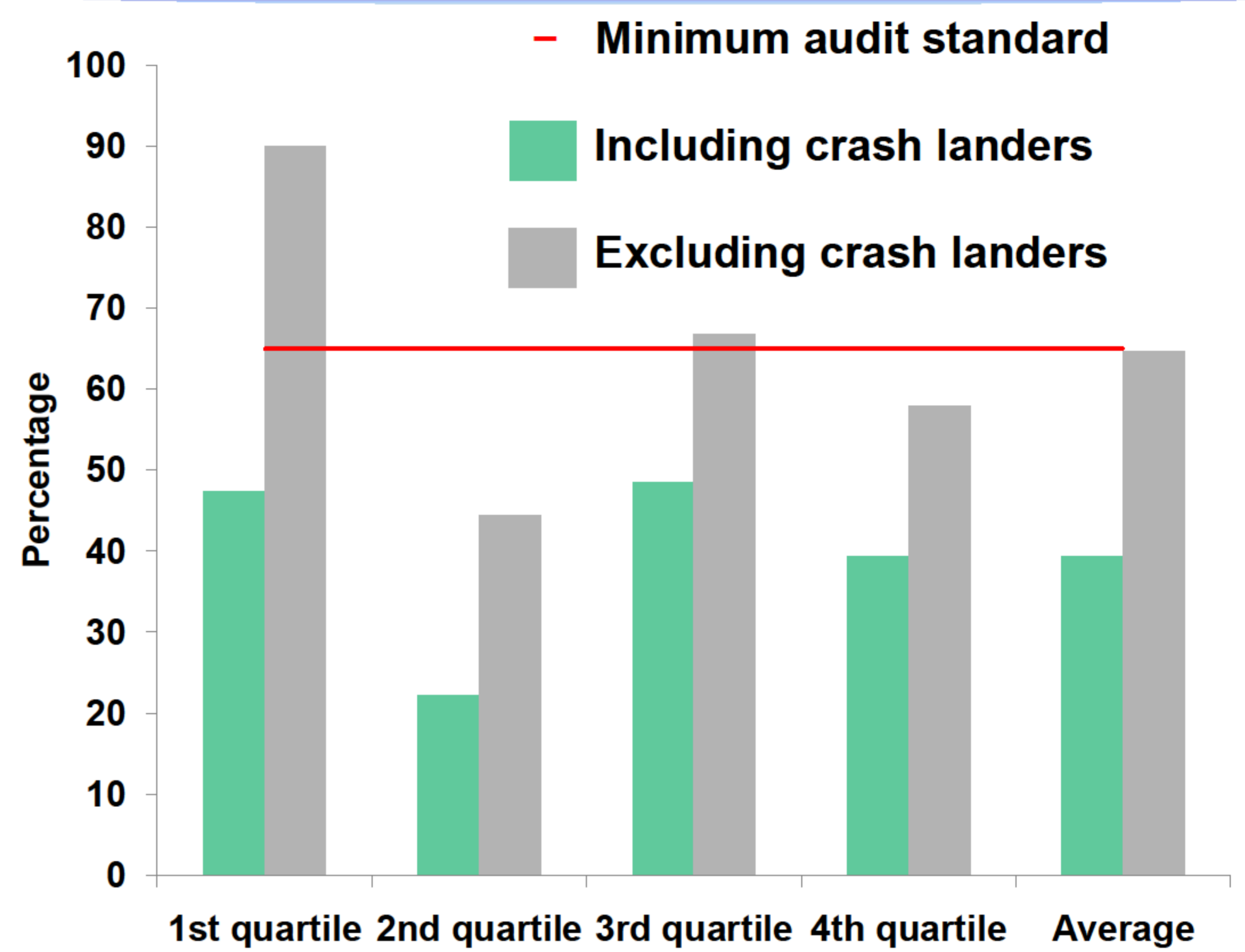
Over one year period:

- 98 patients commenced haemodialysis
- 37 patients were known to the vascular access service for less than 90 days prior to commencing haemodialysis
- 20 patients known to the vascular access service for greater than 90 days commenced haemodialysis with temporary access.

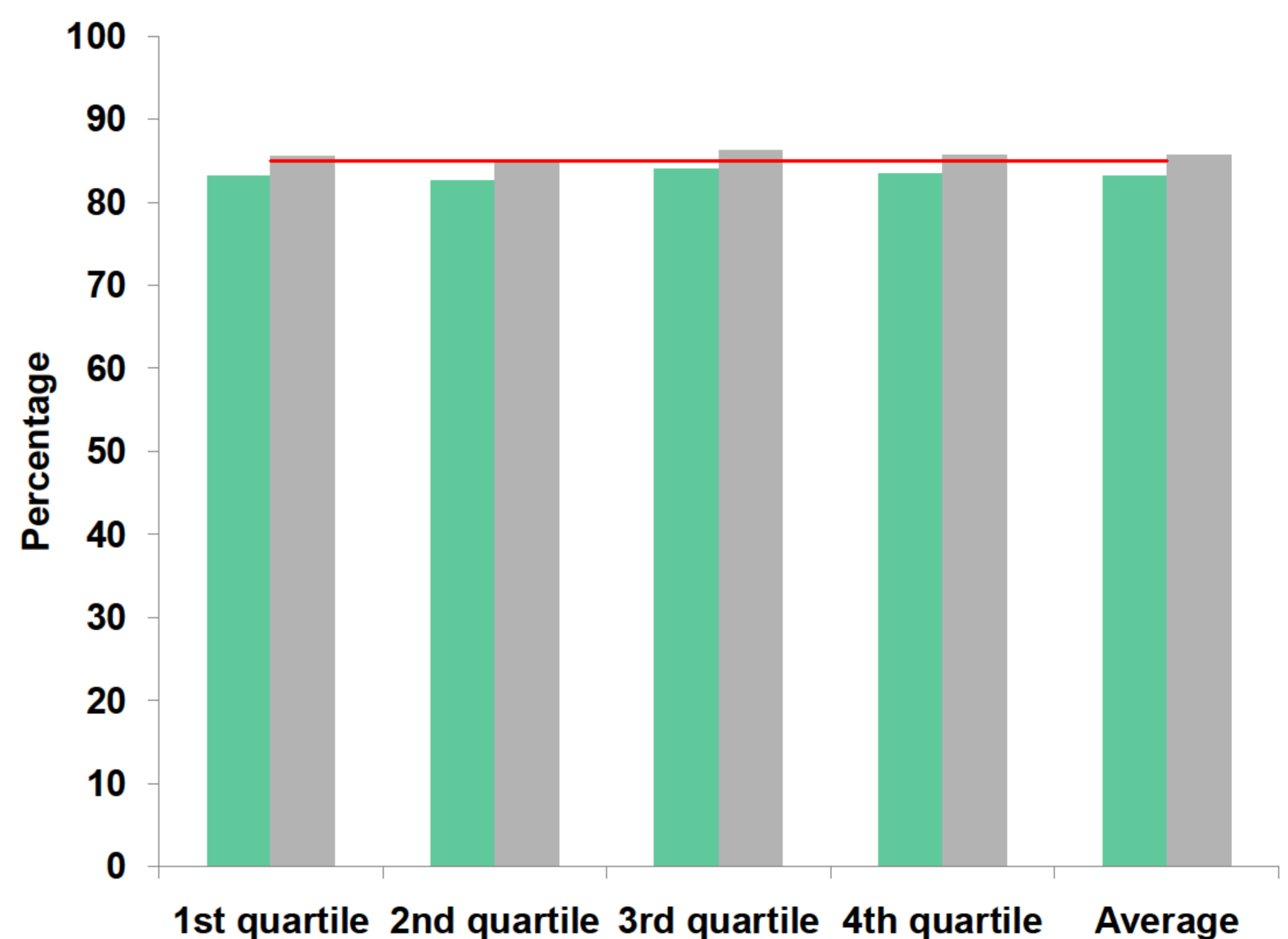
Graph 1. Analysis of patients known to a nephrologist for greater than 90 days commencing dialysis with temporary access



Graph 2. Percentage of patients commencing haemodialysis with an AVF (incidence)



Graph 3. Percentage of patients dialysing with an AVF (prevalence)



## Conclusions

1. Compliance with national guidelines was achieved when patients previously unknown to a nephrologist were excluded from incident and prevalent data. The question therefore arises whether unknown patients should be included in incident and prevalent data.
2. Rapid decline or patient factors were the most significant causes of previously known patients commencing dialysis with temporary access.
3. Further examination of factors leading to late presentation for dialysis may improve compliance with guidelines and patient outcomes.

## References

1. Fluck R, Kumwenda M. Vascular access for haemodialysis, UK Renal Association.
2. Manns B et al. J Am Soc Nephrol 2005; 16:201-209.

