

Kent & Medway vascular service mapping

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Date: 23rd January 2015

Summary

This report was commissioned as part of the vascular service review in Kent & Medway. The report shows the travel time to Medway Maritime and Kent & Canterbury hospitals. The results show that:

- Medway Maritime is the most accessible site within 30 minutes
- Medway Maritime and Kent & Canterbury are equally accessible within 45 minutes
- London hospitals are accessible within 60 minutes by ambulance only to areas in the western quarter of Kent.
- A service centred on Medway Maritime would be over 60 minutes by ambulance from the east coast around Thanet which has a high number of admissions of circulatory disease (n = 1699). A service centred on Kent & Canterbury would over 60 minutes by ambulance from Tunbridge Wells, but this area has lower number of admissions than around Thanet (n = 796).

Introduction

This report was commissioned as part of the vascular service review in Kent & Medway. This report shows the travel time to Medway Maritime and Kent & Canterbury hospitals. Additional information is provided on travel times to London providers and the current pattern rates of emergency admission for circulatory disease across Kent.

Data sources and analysis

Travel time mapping was undertaken by the Geographic Information System unit at SW CSU. Travel times were calculated both for ambulance and for private transport.

Emergency admission rates were calculated on hospital episode statistics for the period April 2013 to March 2014. Rates of emergency admissions were mapped at the Middle Super-Output Area level (MSOA). MSOAs are geographic areas created by groupings of postcodes to create areas of similar population.

Results

Travel time analysis

Current situation

Figure 1 shows the current travel times to the Medway Maritime, Kent and Canterbury, King's and Guy's hospitals by ambulance. It shows that 64% of the population is within 30 minutes of either Medway Maritime or Kent and Canterbury, 94% within 45 minutes and 100% within 60 minutes. Tunbridge Wells is the only major population centre that is more than 45 minutes from one of the hospitals. Figure 2 shows travel time by private transport, this shrinks the population covered to 46% within 30 minutes, 85% within 45 minutes and 98% within 60 minutes. Again Tunbridge Wells is the one more than 45 minutes from one of the hospitals, but also Tonbridge.

Figure1. Travel time to existing vascular centres by ambulance.

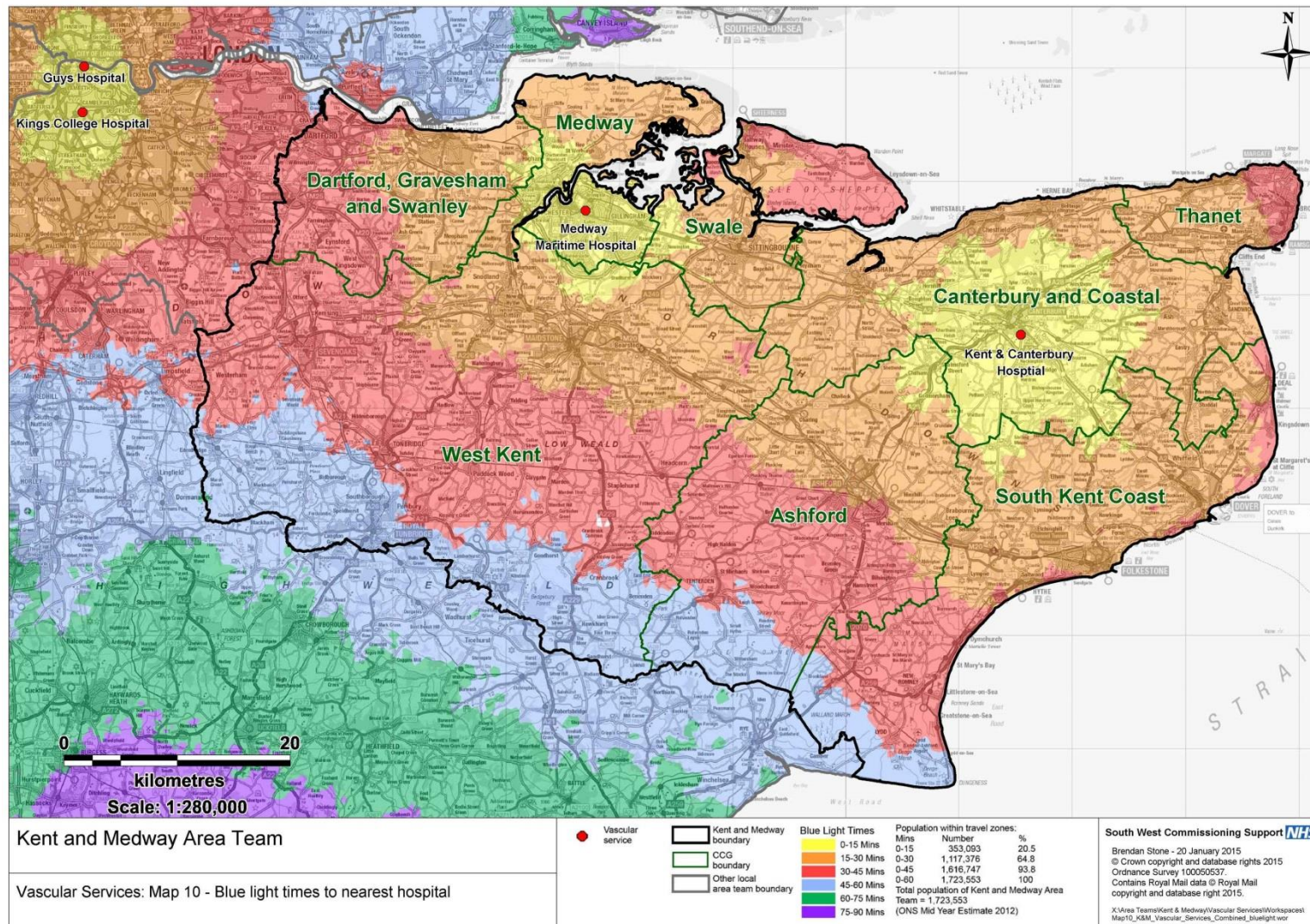
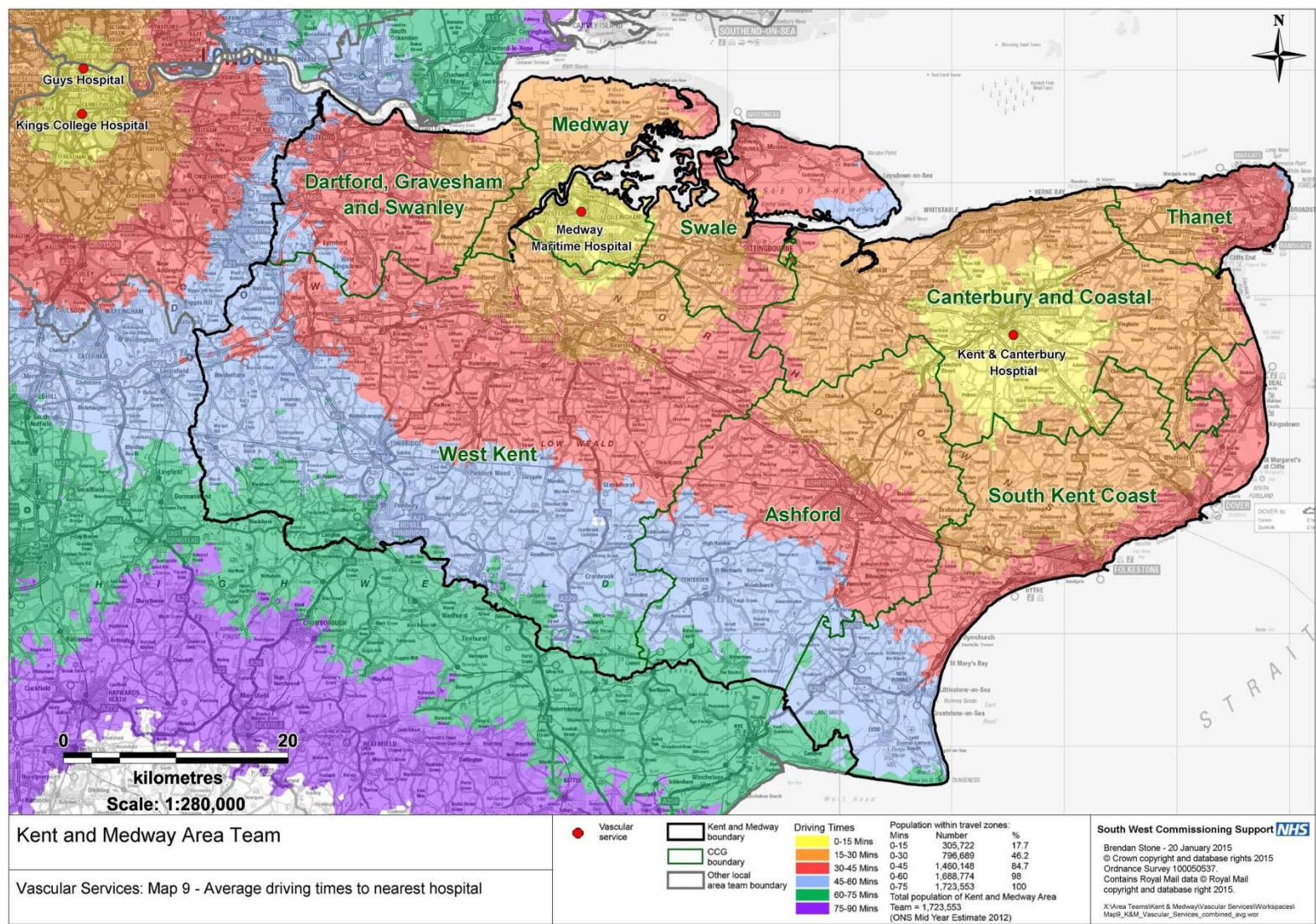


Figure 2. Travel time to existing vascular centres by private vehicle transport.



Travel time to individual hospitals

Figures 3 to 10 show travel times to the individual hospitals – Medway Maritime, Kent & Canterbury, King’s College and Guy’s.

Figure 3 shows that Medway Maritime is accessible to 39% of the population within 30 minutes by ambulance, 72% within 45 minutes and 92% within 60 minutes. Figure 4 shows this falls to 28%, 53% and 80%, respectively, for private transport. The areas not well served are in the east and south coasts of Kent. In comparison, figure 5 shows that Kent & Canterbury covers 28% of the population within 30 minutes by ambulance, 71% within 45 minutes and 95% within 60 minutes. Figure 6 shows this falls to 18%, 49% and 80%, respectively, for private transport. The areas not well served are in the West and South of Kent. Therefore, Medway Maritime covers a greater proportion of the population within 30 minutes, but as travel time increases to 45 minutes there is little difference in terms of the proportion of the population covered, just the geographic area covered. From Medway Maritime the most inaccessible area is the east coast around Thanet, and for Kent & Canterbury it is south-west Kent around Tunbridge Wells.

Figures 7 to 10 show that neither King’s College or Guy’s are within 30 minutes by ambulance from anywhere in Kent, but King’s covers West Kent (but excluding Tunbridge Wells) and Dartford within 60 minutes (23% of the population).

Figure 3. Travel time to Medway Maritime by ambulance.

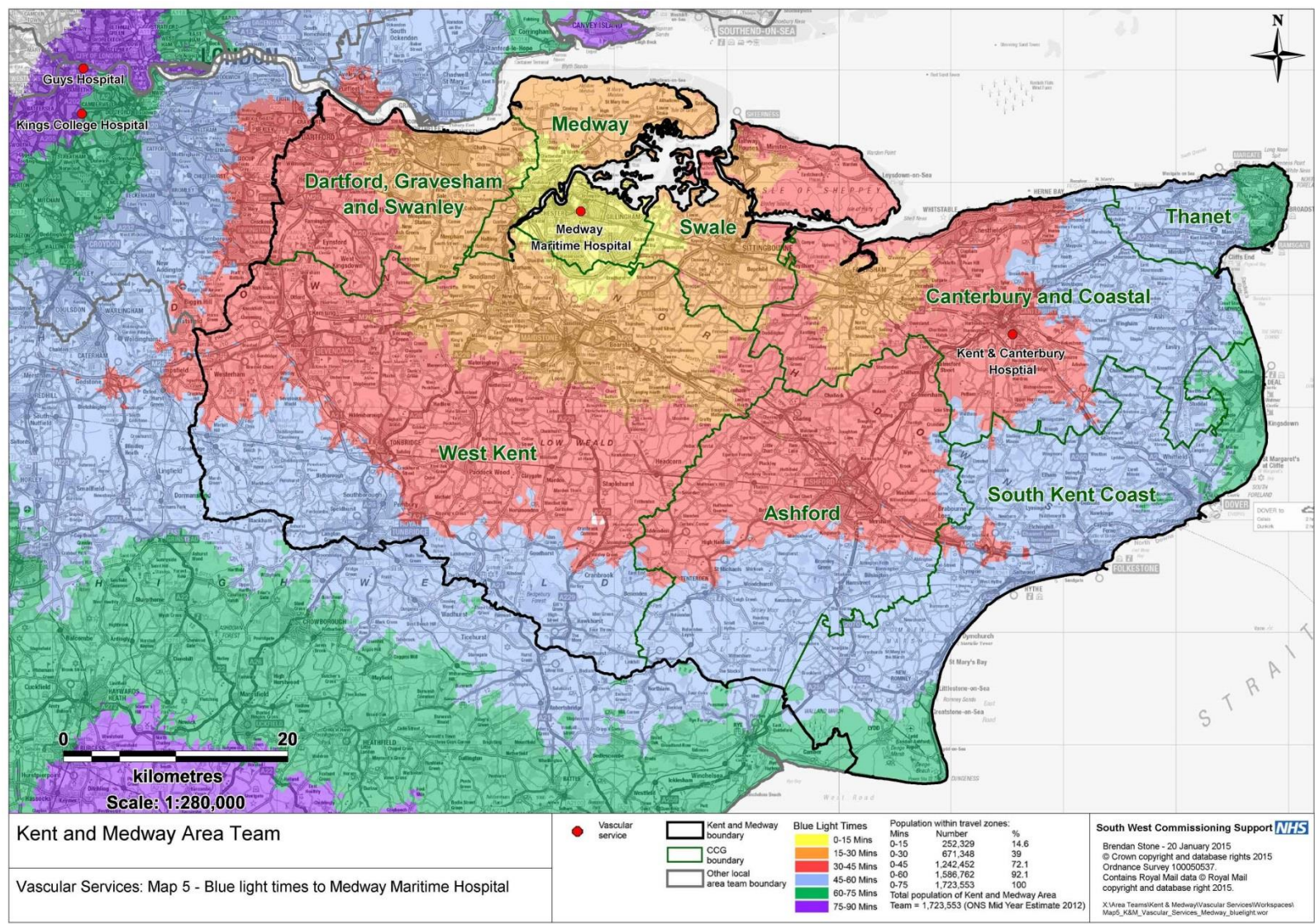


Figure 4. Travel time to Medway Maritime hospital by private transport.

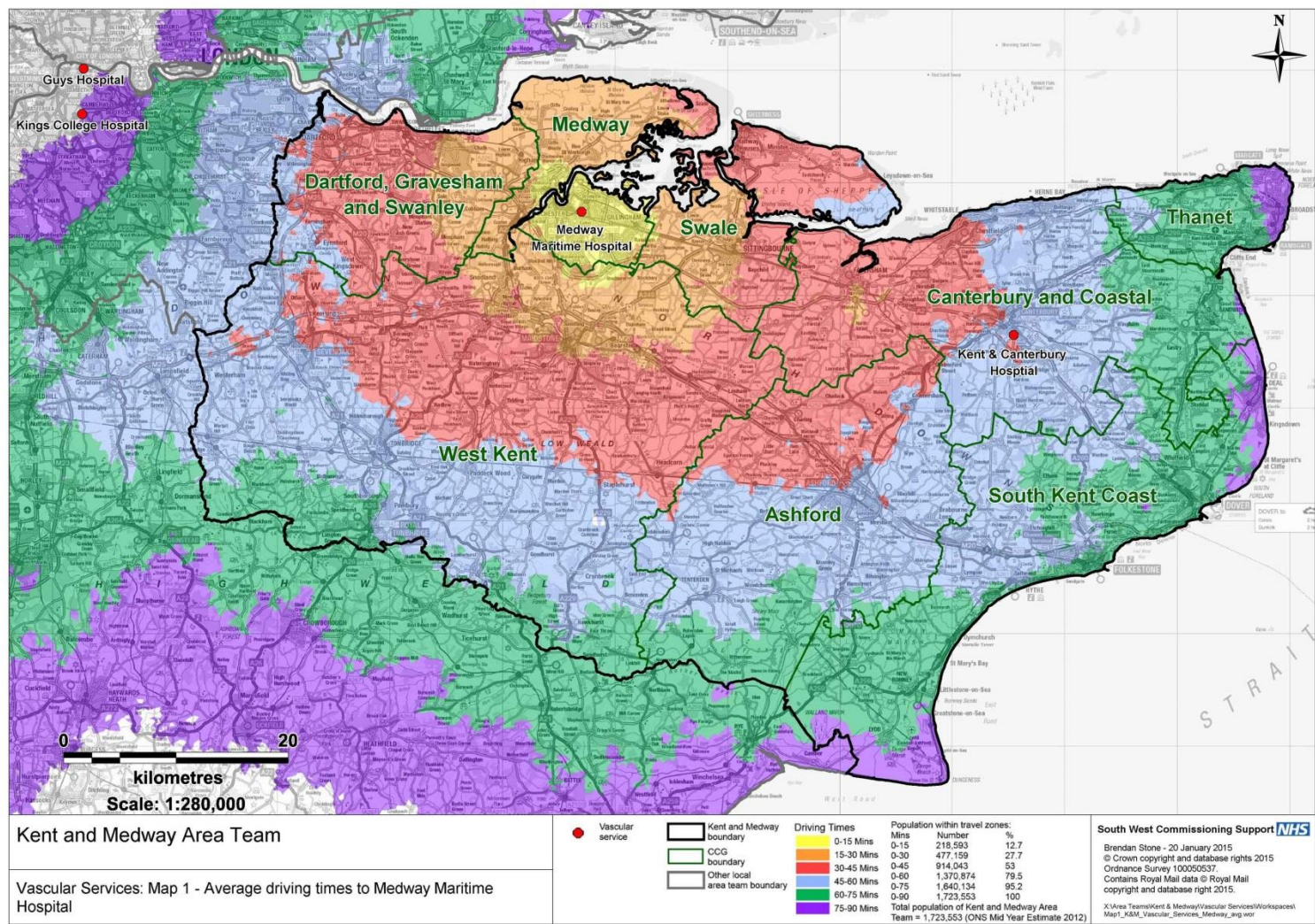


Figure 5. Travel time to Kent & Canterbury by ambulance.

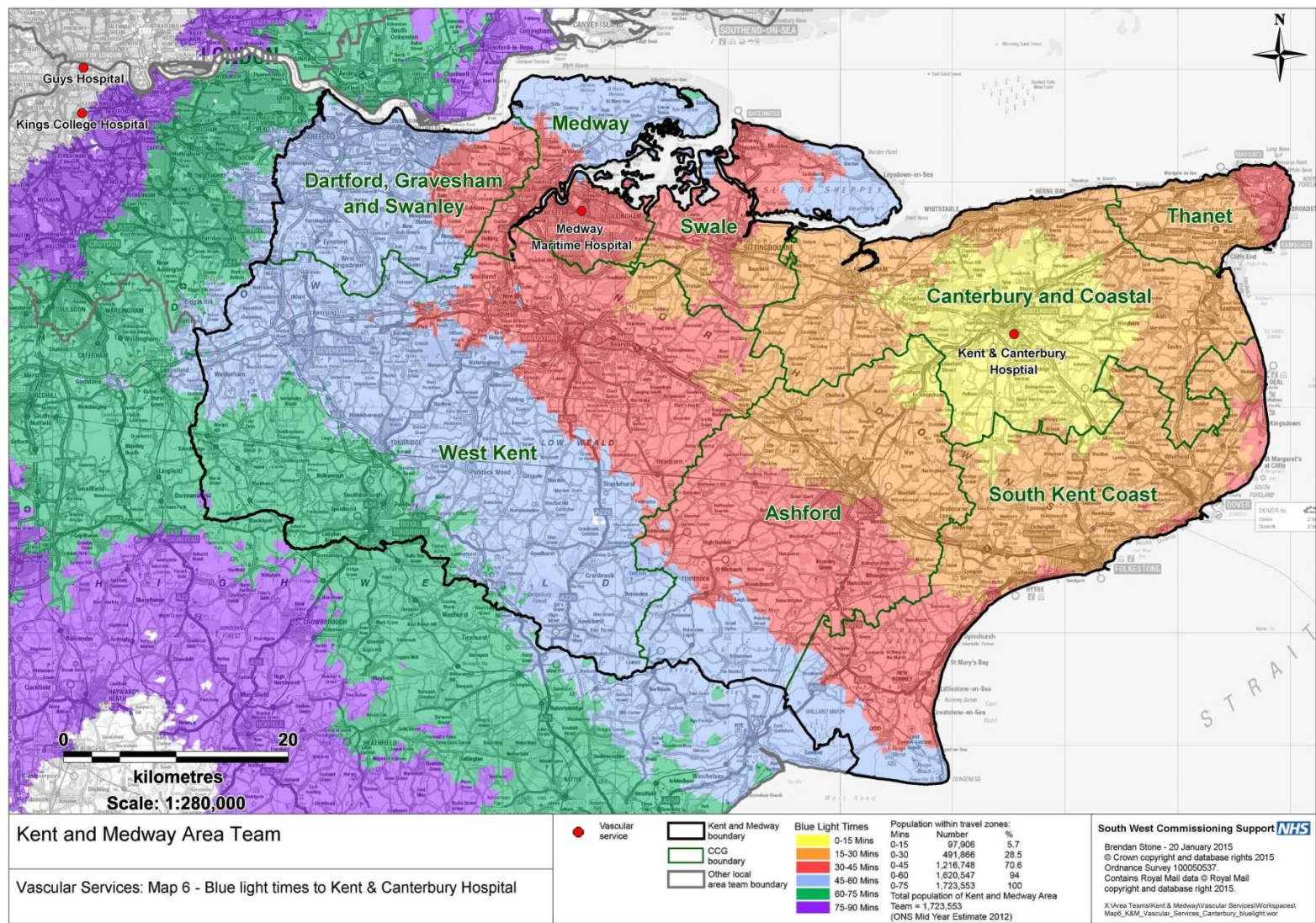


Figure 6. Travel time to Kent & Canterbury by private transport.

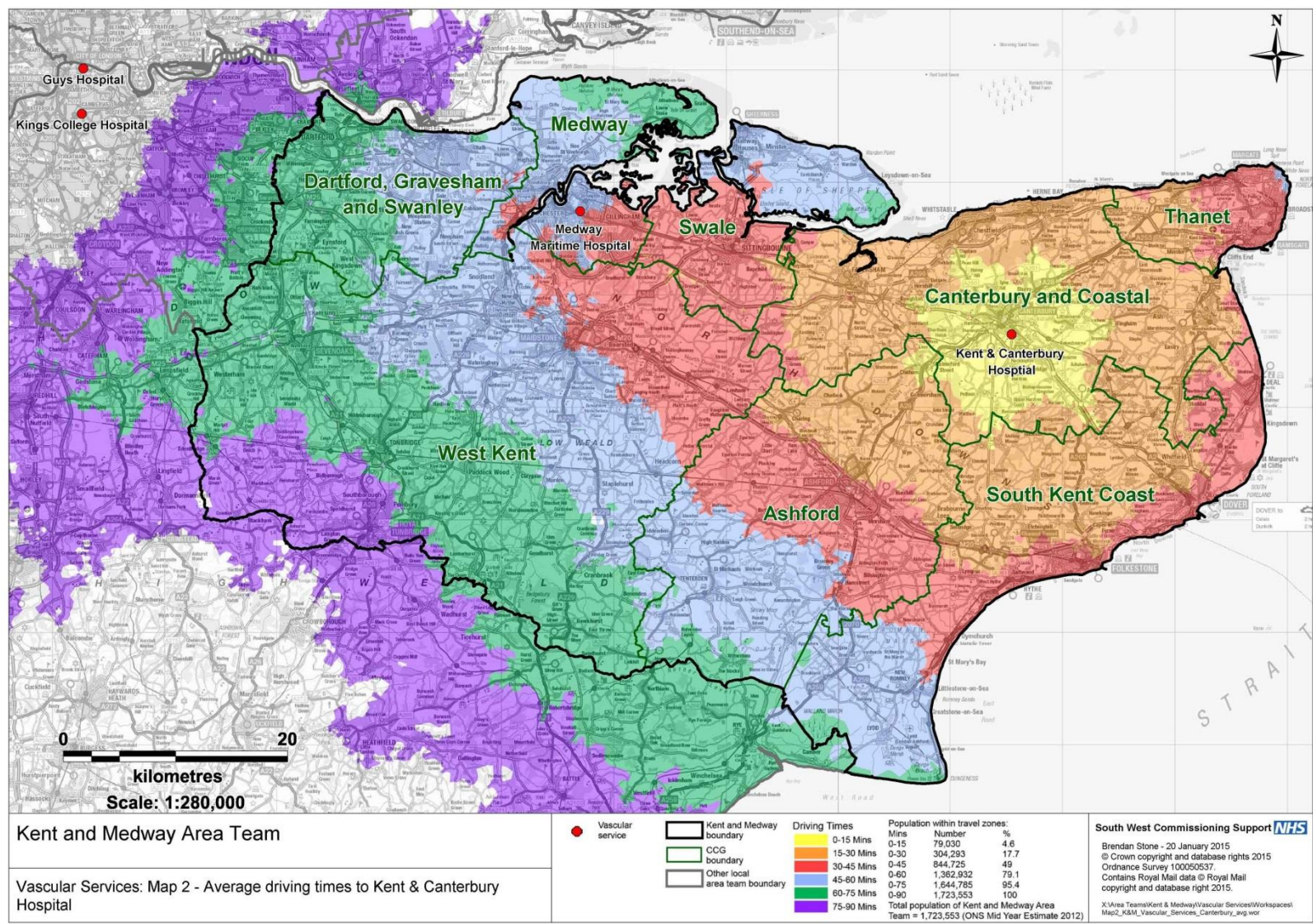


Figure 7. Travel time to King’s College hospital by ambulance.

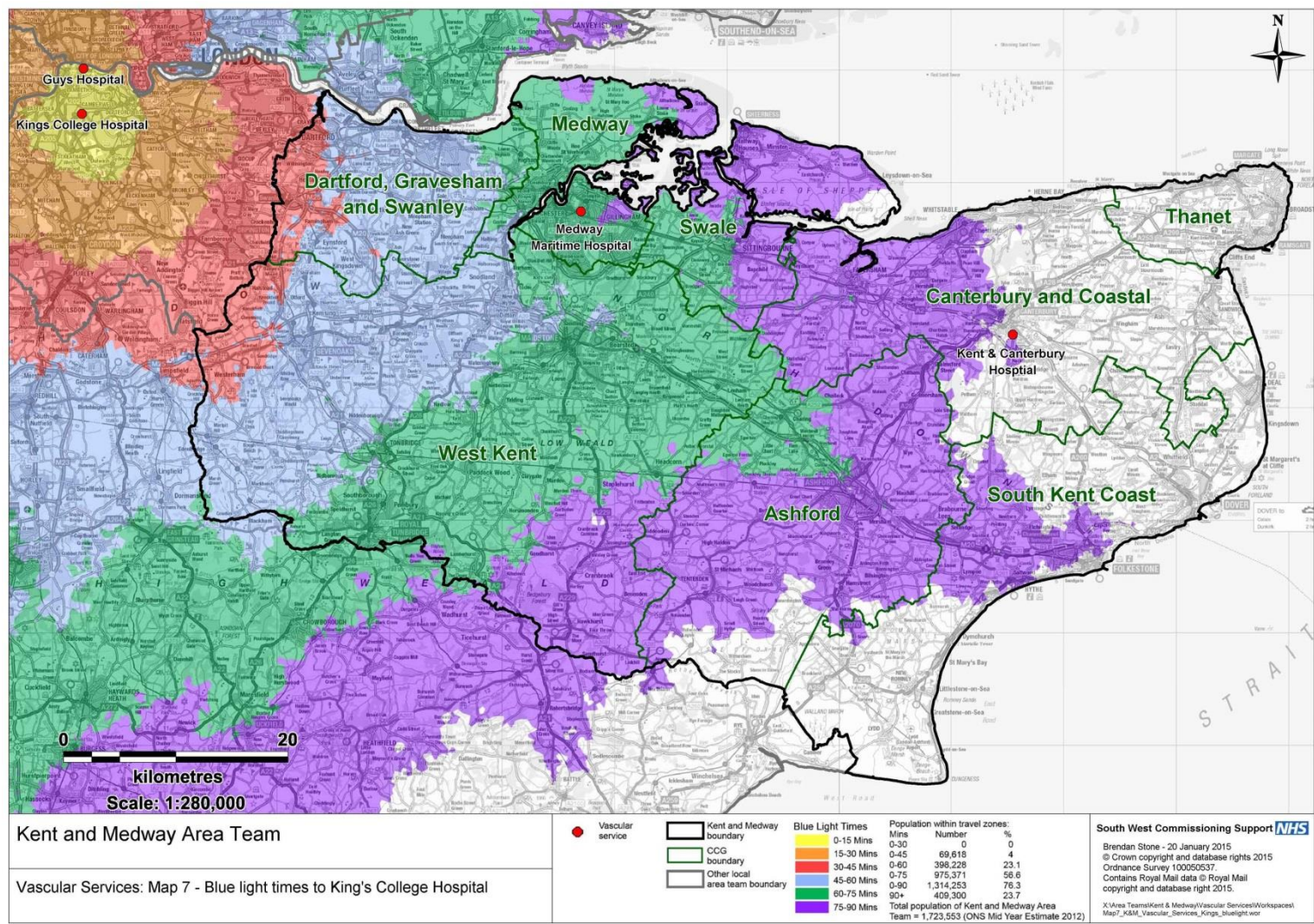


Figure 8. Travel time to King’s College hospital by private transport.

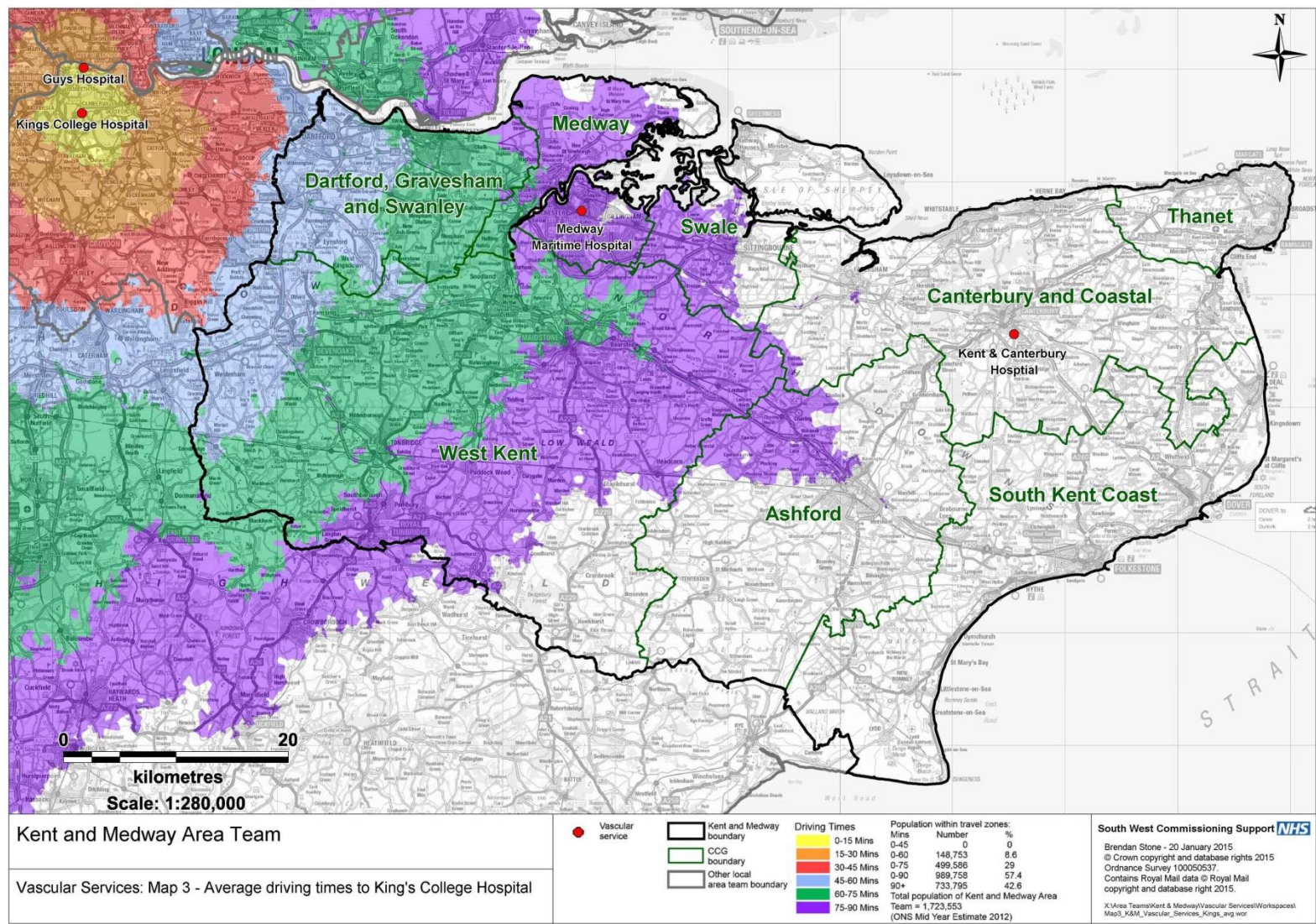


Figure 9. Travel time to Guy’s hospital by ambulance.

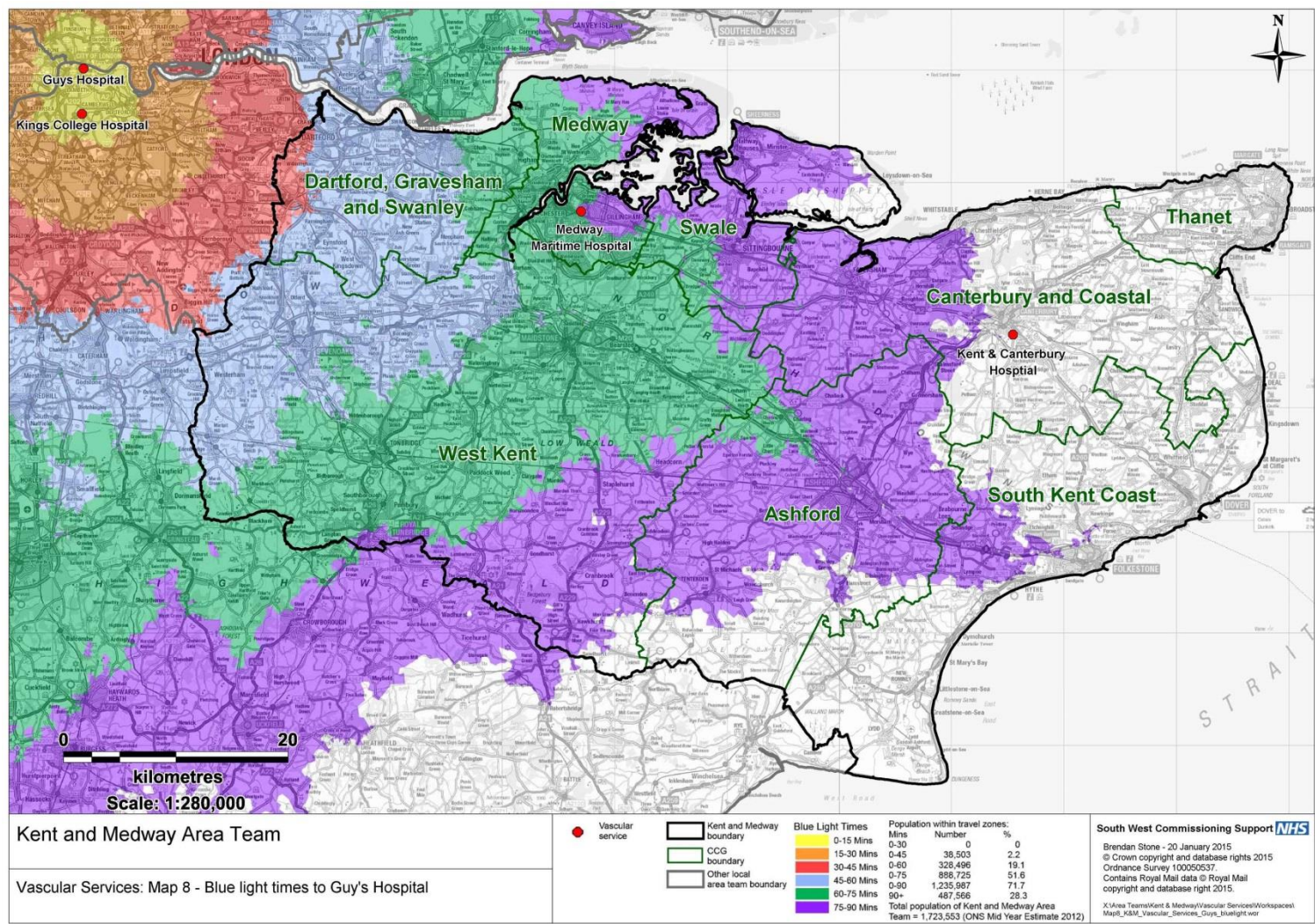
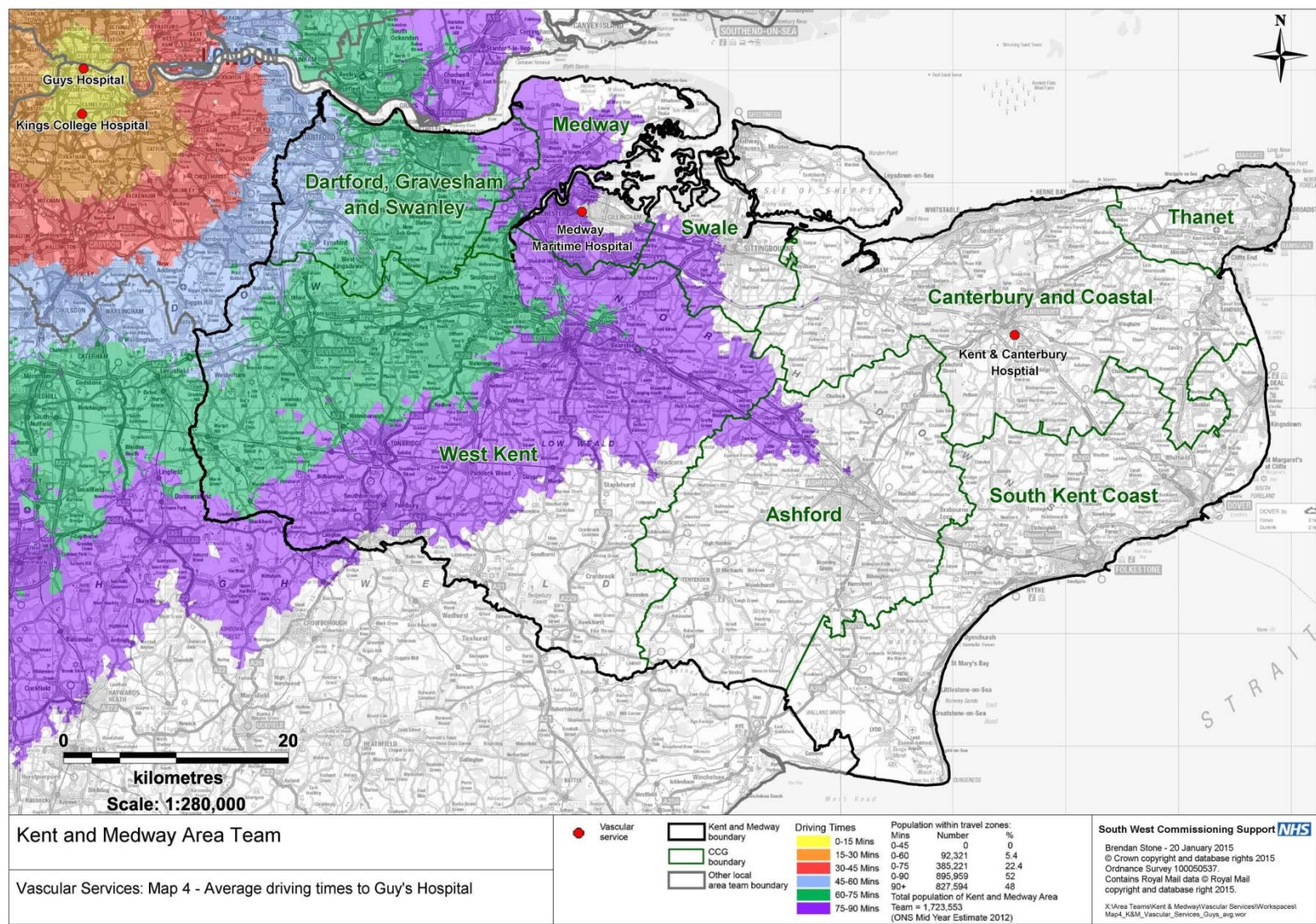


Figure 10. Travel time to Guy’s hospital by private transport.



Existing patterns of access

Table 1 shows the current numbers of emergency admissions for circulatory conditions by CCG.

Table 1. Emergency admissions to hospital within Kent and Medway by CCG for April 2013 to March 2014.*

CCG	Emergency admissions for circulatory conditions
NHS Ashford	1,175
NHS Canterbury and Coastal	2352
NHS Dartford, Gravesham and Swanley	1,776
NHS Medway	2,052
NHS South Kent Coast	2,108
NHS Swale	830
NHS Thanet	1,699
NHS West Kent	3,416

* 477 not assigned due to differences in MSOA mapping used by HES and ONA

Figures 11 shows in terms of absolute numbers of emergency admissions for circulatory conditions there are more in the west of Kent compared to the East, reflecting the larger overall population. Figure 12 shows that when rates of admission It can be seen that rates are generally higher in the south and east of Kent, and this probably reflects difference in epidemiological risk-factors, with a higher proportion of older people living in the east of Kent.

In terms of areas that could not easily access a hospital, a service centred on Medway Maritime would over 60 minutes from the east coast around Thant which has a high number of admissions of circulatory disease (n = 1699). A service centred on Kent & Canterbury would over 60 minutes from Tunbridge Wells, but this area has lower number of admissions than around Thanet (n = 796).

Figure 11. Absolute numbers of emergency admissions for circulatory disease in Kent & Medway for April 2013 to March 2014

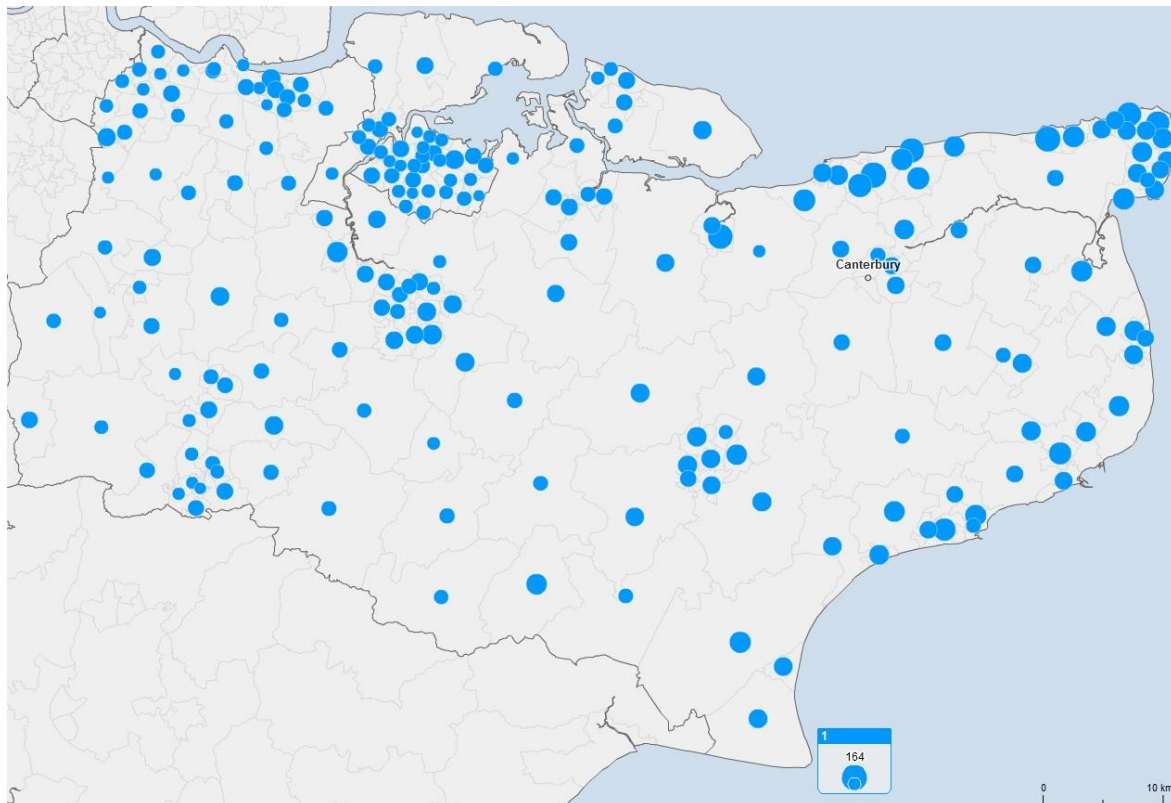
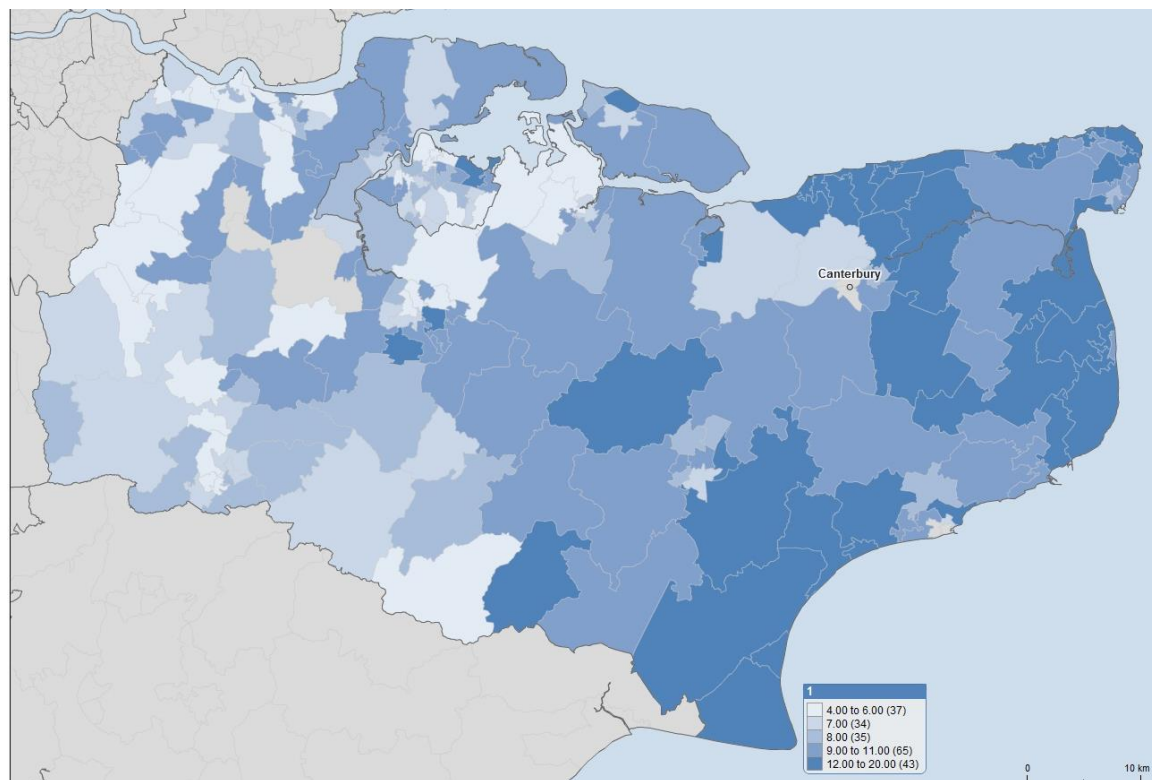


Figure 12. Emergency admission rates for circulatory disease in Kent & Medway for April 2013 to March 2014, per 1000.*



*Based on HES data. Missing data due to differences in mapping levels used for HES and ONS data

Conclusions

The following conclusions can be made based on the data shown in this report.

- Medway is the most accessible site within 30 minutes travel time
- Medway and Kent & Canterbury are equally accessible within 45 minutes
- London hospitals are accessible within 60 minutes by ambulance to areas in the western quarter of areas in Kent.
- A service centred on Medway Maritime would over 60 minutes from the east coast around Thanet which has a high number of admissions of circulatory disease (n = 1699). A service centred on Kent & Canterbury would over 60 minutes from Tunbridge Wells, but this area has lower number of admissions than around Thanet (n = 796).

Further work

Further analysis could be undertaken to support the review of vascular services, including:

- A review of other transformation of vascular services.
- Detailed analysis of patterns of vascular services by condition and treatment within Kent & Medway.
- Assessment of future demand for services based on population projects and risk-factors.