

ses³ 4 and one cohort study⁵ were included for the systematic review. The selection process is shown in figure (1). The studies are tabled with details of author, publication date, population details, and results as in table (1). Most studies show D-dimer has a high sensitivity, around 93 to 97%, in CVT diagnosis. However, its sensitivity is affected by age, thrombus sizes, and the method used in the D-dimer assay.

A review shows that more CVT extension & earlier presentation (<2weeks) were correlated with higher D-dime levels. Unfortunately, most of the studies are not high-quality studies, with variable designs, population, and reference standard tests. The studies showed that D dimer could help predict CVT in combination with risk factors and clinical presentation.

We concluded that the normal D-dimer only should not be used to exclude CVT. There is a probability of using D-dimer in CVT risk scoring and pre-imaging negotiation, and for that purpose, larger and higher-quality studies are needed.

REFERENCES

1. Stam J. Thrombosis of the cerebral veins and sinuses. *N Engl J Med* 2005 Apr 28;**352**(17):1791–8. doi:10.1056/NEJMra042354. PMID: 15858188.
2. Agnelli G, Becattini C. Acute pulmonary embolism. *N Engl J Med* 2010 Jul 15;**363**(3):266–74. doi:10.1056/NEJMra0907731. Epub 2010 Jun 30. PMID: 20592294.
3. Dentali F, Squizzato A, Marchesi C, Bonzini M, Ferro JM, Ageno W. D-dimer testing in the diagnosis of cerebral vein thrombosis: a systematic review and a meta-analysis of the literature. *J Thromb Haemost* 2012 Apr;**10**(4):582–9. doi:10.1111/j.1538-7836.2012.04637.x. PMID: 22257124.
4. Alons IM, Jellema K, Wermer MJ, Algra A. D-dimer for the exclusion of cerebral venous thrombosis: a meta-analysis of low risk patients with isolated headache. *BMC Neurol* 2015 Jul 28;**15**:118. doi:10.1186/s12883-015-0389-y. PMID: 26215857; PMCID: PMC4517419.
5. Thammishetti V, Dharanipragada S, Basu D, Ananthakrishnan R, Surendiran D. A prospective study of the clinical profile, outcome and evaluation of d-dimer in cerebral venous thrombosis. *J Clin Diagn Res* 2016 Jun;**10**(6):OC07–10. doi:10.7860/JCDR/2016/19114.7926. Epub 2016 Jun 1. PMID: 27504325; PMCID: PMC4963685.

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ACCURACY OF TELEPHONE TRIAGE FOR PREDICTING ADVERSE OUTCOMES IN SUSPECTED COVID-19: AN OBSERVATIONAL COHORT STUDY

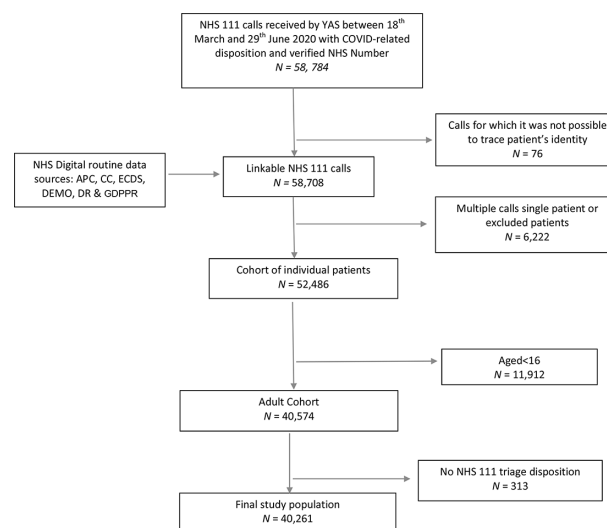
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Aims/Objectives/Background To reduce the risk of spreading infection and hospitals being overwhelmed, on the 18th February 2020, NHS England advised patients with suspected COVID infection to contact NHS 111 instead of attending health care providers. In March 2020, 3 million NHS 111 calls were made; a record number and double the number of the previous year. Concerns have been raised that telephone triage may not be sufficiently accurate in identifying need for emergency care.

We aim to assess accuracy of telephone triage in identifying patients who need emergency care amongst those with suspected COVID-19 and identify factors which affect triage accuracy.

Methods/Design A cohort study of adults who contacted NHS 111 services provided by Yorkshire Ambulance Service between



Abstract 798 Figure 1 STROBE flow diagram of study population selection

Abstract 798 Table 1 Performance of binary NHS 111 triage (ambulance or urgent assessment 4 hours or less) for composite outcome (death or organ support)

Adverse outcome up to 30 days (3%, 2.8-3.2%)			
N=40,261	Adverse Outcome	No Adverse Outcome	
Ambulance/urgent assessment	890	15,035	Sensitivity 74.2% (71.6- 76.6%) Positive Predictive Value 5.6% (5.2 - 6%)
Self-care/non-urgent assessment	310	24,025	Specificity 61.5% (61% - 62%) Negative Predictive Value 98.7% (98.6 - 98.9%)

the 18th March 2020 and 29th June 2020 with symptoms indicating possible COVID-19 infection was completed. Callers were linked to ONS death registrations and routine health care data collected by NHS Digital.

The accuracy of triage outcome (self-care/non-urgent assessment versus ambulance/urgent assessment) was assessed for death or organ support 30 days from first contact. Multi-variable logistic regression was used to identify factors associated with risk of false negative or false positive triage.

Results/Conclusions 3% of the 40,261 callers experienced an adverse outcome. Self-care/non-urgent assessment was recommended for 60%, with a small but non-negligible (1.3%) risk of subsequent deterioration. Triage achieved 74.2% sensitivity (95% CI: 71.6 to 76.6%) and 61.5% specificity (61% to 62%) for the primary outcome. Multivariable analysis suggested some co-morbidities (e.g. respiratory disease) may be over-estimated, and others (e.g. diabetes) underestimated, as predictors of deterioration. Repeat contact with services appears to be an important under recognised predictor of adverse outcomes with 2 contacts (OR 1.77 95% CI: 1.14 to 2.75) and 3+ contacts (OR 4.02 95% CI: 1.68 to 9.65) associated with clinical deterioration when not provided with an ambulance/urgent clinical assessment.