



Analogue to Digital: A Cost Benefit Analysis on Digitising the Annual Risk Assessment Form (ARAF) for Valproate

1. Background

Valproate is an effective treatment for epilepsy and bipolar disorder, but it carries serious risks to unborn babies if taken by their mother during pregnancy. The ARAF is used to determine whether Valproate can be prescribed or continue to be taken. Since Jan 2024 new regulations require people who could become pregnant to have an annual assessment signed off by two specialists. A pilot to digitise the ARAF was funded to reduce the burden on clinical capacity and a cost benefit analysis was requested to on board sites outside the pilot.

2. Objectives

- Identify costs associated with implementing the pilot (fixed and variable) over a 10 year period
- Identify and validate the potential benefits associated with implementing the pilot

First Logic Model Workshop (evaluate what 'Business as usual' looks like; clarify aim; longlist of interventions)

Second Logic Model Workshop (generate activities, outputs and outcomes; refine scope)

3. Process

The workshops included colleagues across the region, including clinicians, ICB leads and Service User reps.

Pinning down the direct costs and benefits of digitising ARAF and indirect benefits (costs and risks avoided) was iterative and lengthy

Unless otherwise indicated the following figures were sourced from SUS data for **women aged 13-54** within the **South East** region

- Total cost of seizure patients brought into A&E by emergency road ambulance in 2024/25 = **£2,664,495*** (5805 conveyances)
- Total cost of women** (aged 13-54) seizure patients treated in A&E (Type 1) in 2024/25 = **£2,086,702** (8080 attendances, 7157 unique patients)
- Total cost of Emergency admissions for suspected seizures*** (women** aged 13-54) in 2024/25 where the HRG was related to epilepsy = **£4,048,514** (1615 spells, 1424 unique patients)
- Total number of women prescribed Valproate of child bearing age = **2634** (ePACT Jan-Mar 25)

* Average cost of an ambulance conveyance to A&E in 2023/24 was £459

<https://www.kingsfund.org.uk/insight-and-analysis/data-and-charts/key-facts-figures-nhs> [7]

** includes trans women but excludes trans men

*** The following codes were used in the search for suspected seizures: G40 (epilepsy), G41 (status epilepticus) and R56.8 (other and unspecified convulsions)

Number of people aged 18+ on the QOF register for Epilepsy in the South East (2023/24): **61,955** [8]

The number of women of childbearing age (12-50) with epilepsy is approximately 139,000 [2011]. This is **23%** of the total population with epilepsy [9, p3]

Women of child bearing age in the South East (23% of people on QOF register): **14,250**

19% (1 in 5) women of child bearing age in the South East (registered on QOF with epilepsy) are prescribed Valproate.

KEY

Data Research findings Assumptions Conclusion

2024/25 Costs per event (women aged 13-54, SE region)
Ambulance conveyance = £459
A&E attendance (seizures) = £258
Emergency Admission (suspected seizures related to epilepsy) = £2,507

2024/25 Activity numbers

- No. of women of childbearing age with epilepsy: 14,250
- No. of women of childbearing age on valproate: 2,634
- No. of women with epilepsy not on valproate: 11,616
- Ambulance conveyances (women 13-54; epilepsy): 5805
- A&E attendances (women 13-54; epilepsy): 8080

- (7) Risk of ambulance conveyance = (4)5805 / (5)8080 = 72%
- (8) Risk of admission = (5)8080 / (6)1615 = 20%
- (9) Valproate reviews total for SE region = 2634
- (10) Valproate reviews per year per trust = 2634/26 = 101 (initial second signature (SS) review followed by annual specialist review (SR)) [20]
- (11) Risk of seizure for women not on valproate per year = (5)8080 / (3)11,616 = 69.56%
- (12) Risk of seizure for women not on valproate / wk = (11)69.56/52 = 1.34%
- (13) No. of seizures following one week delay for SS or SR = (10)101*(12)1.34% = 35.13 (Region)

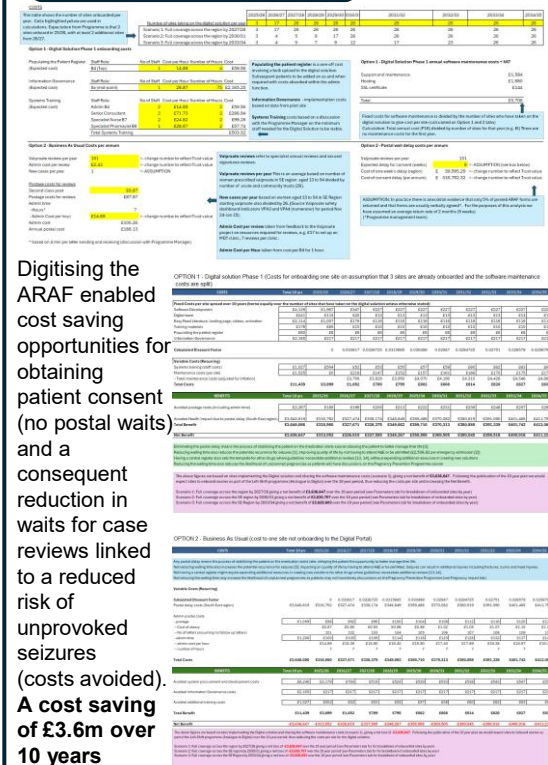
There is anecdotal evidence that within the South East Region only 5% of ARAF forms sent out for consent are returned, with clinicians defaulting to verbal agreements and creating an omission in the formal

Regional impact on emergency services per year = Risk x number of seizures x costs (see Delay calculations tab for detail)

1 weeks delay = £38,256
2 weeks delay = £76,513
4 weeks delay = £153,025
6 weeks delay = £229,538
8 weeks delay = £306,051
10 weeks delay = £382,563
12 weeks delay = £459,076

Version 10.9 of the cost and benefit tool

4. Output



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