Project scope: Psychology Adding Value – Epilepsy Screening (PAVES) project for children and young people with epilepsy who experience mental health issues

11/11/2021

Research question

What is the cost-effectiveness of the PAVES project compared with standard care for the treatment of mental health difficulties among children and young people with epilepsy who have been identified as requiring support?

Inclusion criteria

The selection of studies for inclusion in the literature review element of the project will be based on the following criteria:

Population	Children and young people with epilepsy who have been identified as requiring additional support to deal with concomitant mental health difficulties
Intervention	PAVES project (range of needs-based options to support patients)
Comparator	Standard of care (referral to CAMHS) or no mental health treatment (depending on screening level).
Outcomes	Costs, changes in mental health difficulties over time.
Limits	NHS/PSS perspective for base case analysis, sensitivity analysis to explore extrapolation over longer time horizon as well as wider perspectives e.g. out-of-pocket expenses. This may be dependent on available parameters and capacity.

Planned activities

SHTG have agreed on the following activities to support the development of SHTG Assessment on PAVES for children and young people with epilepsy who experience mental health issues:

We will develop an economic evaluation that compares the costs and consequences of early intervention provided with PAVES compared with the standard of care which is an onward referral to CAMHS (for patients screened as being high risk “red”) or no intervention (for patients screened as being “amber” risk).

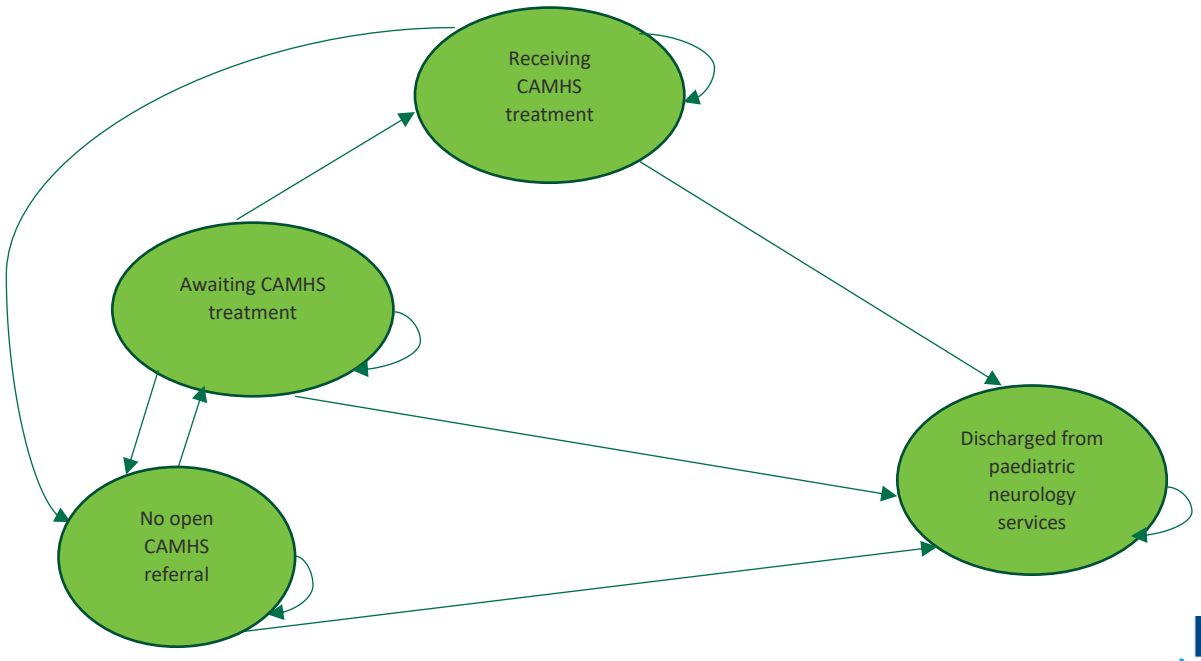
A hypothetical cohort of patients will be followed up from the point of first screening identifying them as at “red” or “amber” risk levels. The model will likely be a Markov model with 4 states.

Patients start off in the “No open CAMHS referral state”, where they can either remain, or move to “Awaiting CAMHS treatment” - if a referral to CAMHS is made. This is dependent on the proportion of patients screened as “red” and “amber” who have referrals made to CAMHS. If this referral is then rejected by CAMHS as not meeting their criteria for treatment, the patient will also return to the “No open CAMHS referral” state.

Otherwise, patients with accepted CAMHS referrals will remain in the “Awaiting CAMHS treatment” state for a period of time reflecting current CAMHS waiting times, after which they will either move to the “Receiving CAMHS treatment” state, or if (e.g. as a result of PAVES intervention) treatment from CAMHS is no longer needed, will return to the “Awaiting CAMHS referral” state.

Upon entering the “Receiving CAMHS treatment” state, patients can remain here for the average number of cycles that reflects typical CAMHS treatment duration in clinical practice. After this, they will return to the “No open CAMHS referral” state upon discharge from CAMHS.

At any point in the model, if a patient becomes old enough to be discharged from paediatric services during the timeframe of the model, they will enter the “Discharged from paediatric neurology services” state.



Resource use will include for example, staff time, equipment, venue hire (where appropriate re: COVID-19) for each of the options available to patients and their families within PAVES. For each of these options we will apply unit costs from standard sources (e.g. PSSRU, PHS Cost Book), to the components of resource use and also estimate the uptake of each component of the PAVES programme across all families accessing PAVES in order to derive the average cost of PAVES per patient.

This will be compared with the average cost of the standard of care, which may include CAMHS treatment, based on routine data sources. The cost of waiting for CAMHS treatment will be based on information from local epilepsy services on any immediate health effects associated with delays to mental health treatment, and the frequency with which these health effects occur. We will also consider the possibility that patients awaiting treatment in CAMHS do not have referrals accepted and would enter the "Discharged" state without ever entering the "Receiving CAMHS treatment" state. This will also be the case for any patients who wait for CAMHS treatment but turn sufficiently old enough to be discharged from paediatric services during this time and would be required to attend adult mental health services instead.

For standard of care, the CAMHS cost will include the screening process which is typically undertaken by CAMHS, but this is unnecessary for all patients who received PAVES because they will have already been screened by the time of their visit to the epilepsy clinic. Therefore for PAVES, the one-off cost associated with screening within epilepsy services will be included in the intervention cost. The evaluation will also make a simplifying assumption that all patients who require a CAMHS referral (either via the standard of care or through screening undertaken as part of PAVES) would not be missed by the paediatric neurology team (although we can test this in sensitivity analysis if necessary).

In terms of health benefits associated with PAVES we will look at:

- differences in the average duration of CAMHS treatment (number of appointments), depending on whether or not the patient received PAVES,
- outcomes from available patient data collected by the paediatric neurology team (e.g. change to screening scores over time), adverse events experienced by patients during the timeframe of the evaluation and the frequency with which these occur e.g. severity of mental health issue(s), length of time spent in the "Awaiting CAMHS treatment" state before receiving CAMHS treatment.

From this we will derive a cost per CAMHS appointment avoided, and/or cost per CAMHS referral avoided.

If sufficient data allow, we will also use the screening questionnaire (SDQ) in an exploratory analysis to extend the time horizon of the model beyond discharge from paediatric neurology services, given that longer-term wider societal effects (e.g. avoiding prison) associated with SDQ scores in childhood have been used in the published literature by the "Triple P Programme" (Positive Parenting Programme). A supplementary search has been run as part of the topic exploration to explore the availability of these data.

A budget impact analysis will be included to consider roll-out to a) other parts of Scotland and b) other long-term conditions, should the value of PAVES be established by the economic analysis.

End products

At the end of the project, SHTG will publish:

- SHTG Assessment
- Peer review, Quality Assessment

Timescales (approximate)

February/March 2022