**Methods:** The review protocol was registered on Prospero (CRD42022270039) and relevant studies published from inception to 23 October 2022 were identified through searches of the following databases: PubMed, Embase, the National Health Service Economic Evaluation Database, PsycINFO, the Health Economic Evaluations Database, and EconLit. Studies were included if they were modeling works of full economic evaluations, including cost-effectiveness analyses (CEA), cost-utility analyses, cost-benefit analyses, and cost-consequence analyses. The primary outcome was the cost effectiveness of adherence interventions reported as the incremental cost per additional quality-adjusted life-year (QALY). Study quality was assessed with the Quality of Health Economics Studies instrument. Due to the heterogeneity of the data, a permutation matrix was used for quantitative data synthesis rather than a meta-analysis.
**Results:** The 15 studies identified were conducted in North America (8/15), Africa (4/15), and Europe (3/15). The time horizon was one year in one study, ten years in one study, 20 years in three studies, and a lifetime horizon in ten studies. The types of interventions were smartphone-based (5/15), nurse involved (2/15), directly observed therapy (2/15), case manager involved (1/15), simplification of regimens (1/15), Link4Health (1/15), and others (3/15) that involved multicomponent intervention. The interventions gained higher QALYs with cost savings in all 15 studies and gained QALYs at a higher cost at an acceptable incremental cost-effectiveness ratio in 80 percent (12/15) of studies. The studies were of fair (13%) to high quality (87%).
**Conclusions:** This study is the first systematic review of decision analytic model-based CEAs of adherence interventions in the management of PLWHA. Most of the identified studies recently published good quality cost-effectiveness analyses with an adequate timeframe.

## OP94 Economic Evidence On Hemodialysis Access Creation Procedures In Patients With End-Stage Kidney Disease: A Systematic Literature Review

Ritu Gupta, Upasna Gaba, Christopher Delaney and George Papadopoulos (george@lucidhealthcon.com)

**Introduction:** It is important to create and maintain durable hemodialysis (HD) access in health systems to reduce morbidity and maintain overall cost control in patients with end-stage kidney disease (ESKD). To evaluate the choice of HD vascular access creation procedures and their related economic costs, we aimed to identify economic evaluations on vascular access (VA) creation procedures in patients with ESKD.
**Methods:** A systematic literature review was conducted using the Cochrane methodology to identify cost-effectiveness analyses (CEAs), budget impact analyses, and cost analyses of various HD access creation procedures. Eligible publications published from 2012 onwards were retrieved by searching PubMed, Embase, and the Cochrane Library. The Consolidated Health Economic Evaluation Reporting Standards 2022 checklist and ISPOR Task Force guidelines were used to appraise the quality of the economic evaluations and budget impact analyses, respectively. Costs were adjusted for inflation and purchasing power parity and standardized to US dollars.
**Results:** A total of 40 economic evaluations met the inclusion criteria, including 28 cost analyses, three budget impact analyses, and nine CEAs. Widely evaluated procedures in the published literature were endovascular and surgical arteriovenous fistula (AVF), arteriovenous graft (AVG), and central venous catheterization (CVC). The results indicated that AVF was the most cost-effective strategy, followed by AVG, and CVC. Three studies showed that endovascular AVF was cost effective, compared with surgical AVF, and resulted in overall cost savings of about USD53 million dollars over a five-year period. Results of the quality assessment showed that budget impact analyses scored 63 percent, while the average score for economic evaluations was 58 percent.
**Conclusions:** It was challenging to identify a single effective method of managing vascular access due to the substantial heterogeneity among VA creation techniques. However, most of the included economic evaluations showed that AVF was a cost-effective method of VA creation relative to other identified techniques for patients with ESKD on HD.

## OP95 A Systematic Review Of The Cost And Cost Effectiveness Of Immunoglobulin Treatment In Patients With Hematological Malignancies

Sara Carrillo De Albornoz (sara.carrillo@monash.edu), Khai Li Chai, Alisa M. Higgins, Dennis Petrie, Erica M. Wood and Zoe K. McQuilten

**Introduction:** Patients with hematological malignancies are likely to develop hypogammaglobulinemia (HGG) and subsequent infections. Immunoglobulin (Ig) replacement is commonly given to prevent infections, but the total costs and cost effectiveness of its use are unknown.
**Methods:** A systematic review was conducted following PRISMA guidelines to assess evidence on the costs and cost effectiveness of Ig replacement, administered intravenously (IVIg) or subcutaneously (SCIg), in adult patients with hematological malignancies. This review was registered with PROSPERO (CRD42022321908).
**Results:** Six studies were included out of a total of 3,612 citations. A narrative synthesis was conducted because of the high level of heterogeneity across the included studies. Two economic evaluations were identified: one cost-utility analysis (CUA) of IVIg versus no Ig and one comparing IVIg with SCIg. The quality of the evidence was low, with most studies having small patient numbers and a high risk of bias. Compared with no treatment, Ig replacement reduced the hospitalization rate in patients with hematological malignancies.

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One study reported no change in hospitalization rates following a program to reduce IVIg use, and an observational study comparing IVIg with SCIg found more hospitalizations with SCIg but lower total costs per patient. The CUA comparing IVIg with no IVIg suggested that IVIg treatment was not cost effective, but this study was published in 1991 and had significant limitations. The other CUA found that home-based SCIg was more cost effective than IVIg, but model inputs were derived from unpublished data in a very small patient cohort with HGG and different malignancies.
**Conclusions:** Our review highlights key gaps in the literature. The cost effectiveness of Ig replacement in patients with hematological malignancies is still very uncertain. Despite the increasing use of Ig replacement there are limited data regarding its direct and indirect costs, and its optimal use and implications for healthcare resources remain unclear. Given the paucity of data on the cost and cost effectiveness of Ig treatment in this population, further health economic research is warranted.

## OP96 Adapting Patient Involvement For Fast Track Appraisals

Mark Rasburn (mark.rasburn@nice.org.uk), Helen Crosbie and Laura Marsden

**Introduction:** The National Institute for Health and Care Excellence (NICE) is piloting a new innovative approach to the way digital products, devices, and diagnostics that most reflect system need and demand are assessed. This early value assessment (EVA) approach will allow a more rapid assessment to enable patients to benefit from promising technologies sooner. Involving patients in the health technology assessment (HTA) lifecycle is a core principle at NICE, but established methods are not suitable for a rapid timeframe. NICE needs to adapt the approach to ensure that patients are supported to participate in EVAs and that their involvement is meaningful.
**Methods:** Due to the rapid timeframe, it was important to ensure patient contributors were not overloaded with information and that contact points were aligned. NICE reviewed the standard induction, support documents, and contact points to adapt the support provided. This included:

- updating recruitment documents to communicate the role of the committee and the EVA process;
- combining induction meetings between various NICE teams and providing recorded presentations;
- organizing earlier peer support with experienced lay members; and
- advising which of NICE's nine online modules were most relevant.

**Results:** Support for patient contributors has been an important part of the HTA process, so enabling people to prepare and confidently deliver content at a committee meeting is vital. There has been some variation in the processes for different topics, but the feedback received from patient contributors indicated that their involvement was meaningful and valued. This was attributed to their close working relationship with the project team. NICE is collecting feedback from all patient contributors using an online survey. The findings of this survey and the evaluation of the support mechanisms will be presented.
**Conclusions:** Despite shorter timeframes, patient involvement has not been compromised. NICE will use the feedback from patient contributors to review and adapt the induction process and support offered. This will support patient contributors and enable NICE to allocate appropriate resources in the shortened timeframe.

## OP98 Improving Patient Involvement In Health Technology Assessments: Is It Enough To Train Just The Patients?

Heidi Livingstone (heidi.livingstone@nice.org.uk), Ella Fitzpatrick, Marsden Laura, Mandy Tonkinson and Sally Taylor

**Introduction:** Patient involvement is a core principle of the National Institute for Health and Care Excellence (NICE) and we continually strive to improve patient involvement in health technology assessments (HTAs) of medicines. We iteratively surveyed and reviewed how patient involvement can be improved with patient organizations, patient experts, NICE HTA decision-making committees, and staff. We re-examined feedback that we collect on an ongoing basis, as well as one-off evaluations, to check how we can improve patient involvement.
Improvements ranged from support for and how we work with patient stakeholders to training the various stakeholders who take part in the HTA process to build up a comprehensive and evolving training package and stimulate a cycle of continually improving patient involvement.
**Methods:** We reviewed the outcomes and recommendations from the following larger projects:

- Review of public involvement across NICE 2015;
- Improving meaningful patient involvement in HTAs 2019;
- Improving patient expert involvement in committee meetings 2019; and
- The value of patient expert input 2022.

Feedback from monthly surveys of patient experts and organizations was also reviewed.
**Results:** The results included recommendations about:

- Changing the culture so that patient involvement at NICE is everybody's business;
- The key role of the committee chair in including patient experts;
- The importance of committee culture and behavior in including and valuing patient input;

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