

Exploring which proxy conditions are conceptually similar to alopecia areata, in terms of patient’s lived experience and health-related quality of life; a scoping review to inform HTA submission

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INTRODUCTION

Alopecia areata (AA) is an autoimmune disorder characterised by circular patches of non-scarring hair loss.<sup>(1)</sup> Evidence suggests that AA patients suffer a significant psychological burden and health related quality of life (HRQoL) impairment, with AA negatively impacting emotional and psychological wellbeing, confidence, socialisation, relationships, and lifestyle.<sup>(2,3)</sup> Literature suggests that the full burden of AA is unlikely to be captured through generic preference-based measures such as the EQ-5D.<sup>(4)</sup> When generic preference-based measures fail to capture the full burden of HRQoL to patients, alternative approaches to reimbursement discussions need to be considered. Some payers, such as the National Institute of Health and Care Excellence (NICE) in England and Wales, allow the use of utility values from proxy conditions in cost-effectiveness models, if proven to be more appropriate.<sup>(5)</sup> However, ensuring the correct proxy condition and associated utility values are used is critically important. This scoping review sought to select a suitable proxy condition for AA, by mapping key HRQoL domains and symptoms of importance as defined by patients with lived experience of the condition.



METHODS

Phase 1: Identification of proxy health conditions

A structured electronic search was conducted in Medline (January 2013 - May 2023). This was further complemented by a pragmatic search conducted on PubMed and Google Scholar. Both searches sought to identify conceptually similar chronic conditions in terms of patient relevant domains, key symptoms and lived experiences to AA. Conceptual models for each of the identified proxy conditions were also retrieved, where available. Using the findings of the structured and pragmatic searches, a list of potential proxy health conditions matched to AA was created. The condition with the most overlapping domains and evidence supporting similarities in HRQoL was selected as the proxy health condition, and associated utility values were identified in Phase 2.

Phase 2: Identification of utility data for proxy health condition

Following the selection of the most appropriate proxy health condition, a structured electronic search for **all** utility data (regardless of measure used, setting, sub-population, etc.) for adults with the proxy health condition was conducted in Medline (January 2013 - June 2023) and supplemented by a grey literature search of dermatology societies (January 2021 to June 2023). Potentially relevant publications at title and abstract stage were prioritised for full text screening. Following full text screening, included records were categorised based on HRQoL measurement tools (e.g. EQ-5D, SF-6D) and only those studies with utility values were included for extraction.

RESULTS

Phase 1: Identification of proxy health conditions

Six different health conditions were identified that overlapped with AA in key patient-relevant domains and symptoms. This included emotional function, psychological function and relationship impacts, stigmatisation, and physical manifestations and symptoms of AA.<sup>(4)</sup> Identified conditions included atopic dermatitis (6 overlapping domains), acne, chronic hand eczema and psoriatic arthritis (5 domains each), irritable bowel syndrome and psoriasis (4 domains each), *see Table 1*.

Of the six conditions, atopic dermatitis (AD) showed the most overlap with AA conceptual models’ domains. AD was then selected as the proxy health condition to investigate.<sup>(6)</sup>

Table 1: Potential proxy health conditions identified in the literature

Condition	Number of overlapping domains with AA	Conceptual models					
		Overlapping domains with AA (n=number of overlapping domain items with AA)					
		Physical impacts	Emotional impacts	Stigma	Psychological impacts	Relationship impacts	Social and lifestyle impacts
Atopic dermatitis	6	Y (n=1)	Y (n=4)	Y (n=1)	Y (n=4)	Y (n=3)	Y (n=4)
Acne	5	N	Y (n=4)	Y (n=2)	Y (n=3)	Y (n=3)	Y (n=6)
Chronic hand eczema	5	N	Y (n=4)	Y (n=1)	Y (n=4)	Y (n=3)	Y (n=3)
Psoriatic arthritis	5	N	Y (n=4)	Y (n=1)	Y (n=2)	Y (n=3)	Y (n=3)
Irritable bowel syndrome	4	N	Y (n=4)	N	Y (n=3)	Y (n=3)	Y (n=3)
Psoriasis	4	N	Y (n=2)	N	Y (n=1)	Y (n=3)	Y (n=6)

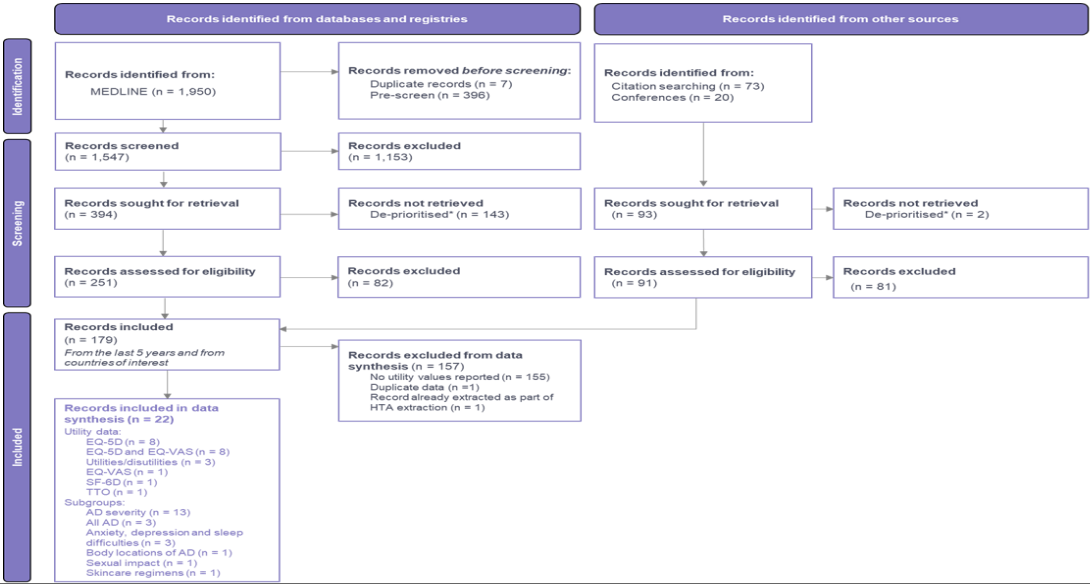
Abbreviations: AA, alopecia areata

Phase 2: Identification of utility data for proxy health condition

After screening the retrieved records, 22 publications were included for full data extraction, 12 of which included a UK study population. Five publications reported data from randomised clinical trials (RCTs), and 17 publications reported real world (RW) data, such as cross-sectional surveys and longitudinal cohort studies. All extracted data was limited to the adult population, 18 years +. *See figure 1 for further details*.

Across all studies, utility values reported for AD patients ranged from 0.40–1.00 regardless of utility measure (e.g., EQ-5D, SF-6D), subpopulation, treatment or timepoint. Disease severity was linked to lower utility values across all studies: 0.73–0.92 mild AD; 0.42–0.91 severe AD. Lower utility values were reported in some RW settings when compared to RCTs, which mirrors findings in other disease areas.

Figure 1 : PRISMA flow diagram of utility studies



CONCLUSION

This scoping review demonstrates a systematic and robust approach to identifying suitable proxy conditions for AA, by considering the impact of the disease on a patient’s lived experience. Out of six conditions identified, AA showed the most similarity with AD, across a range of domain and symptoms, including physical, emotional, and psychological, whilst also causing stigma, and affecting relationships, social activities, and lifestyle. Descriptive literature for both conditions suggests that in particular, the psychological impact on patients contributes largely to the burden on patients HRQoL.<sup>(4,6)</sup>

Given the similarities in pathogenesis and aetiology to AA, AD is a valuable candidate to be used as a proxy health condition to demonstrate the HRQoL of AA patients in future HTA submissions, if an alternative source of utility values is required, or even as a useful comparator to understand the validity of the utility values generated within a condition. Successfully identifying proxy health conditions and their associated utility values, with a patient-centred approach ensures that we are making decisions based on what truly matters to patients, enabling meaningful patient-centred treatment-related benefit assessments and subsequent decision making by payers.

RECOMMENDATIONS

- This study offers a robust, yet exploratory approach to finding a more patient-centred approach to identifying suitable proxy health conditions for HTA purposes. Future research and exploration is required to understand its suitability and applicability to patients, other health conditions, and settings.
- Definitive next steps, include seeking patient input to understand the depth of similarity that exists in the lived experience of patients with AA and AD, to ensure that from their perspective, the suitability of AD as a proxy health condition with considering alternative utility values.

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