

A targeted review of caregiver experiences of CAR-T therapy in ambulatory settings

Ringland C¹, Bagshaw E¹, Llewellyn S¹, Pugh G²

¹Vitaccess, London, United Kingdom ²Anthony Nolan, London, United Kingdom

Objectives

- Chimeric antigen receptor T-cell (CAR-T) therapy is an immunotherapy that genetically modifies T cells to attack cancer cells.
- Increasingly, CAR-T infusion, observation, and/or follow-up are performed in the ambulatory (outpatient) setting.
- Ambulatory CAR-T patients must have a suitably educated 24/7 caregiver for ~30 days. During this time, patient and caregiver must stay within ~1 hour of hospital. Caregivers have to administer medications, monitor symptoms and side effects, take patients to appointments, and communicate with the care team.
- Little is known about caregivers' perspectives of ambulatory care. This review aimed to identify literature on caregiver experiences of CAR-T in ambulatory settings.

Methods

- A targeted review of literature published since 2017 was conducted in May 2025 using PubMed, Google Scholar, and ResearchGate; **Table 1**.
- Publications were assessed for information on caregiver experiences of CAR-T in the ambulatory setting.
- As pilot searches indicated few publications specifically addressing the research objectives, strict inclusion/exclusion criteria were not used. Instead, reviewer judgement on general relevance was applied.

Table 1 Search strategy

Source	Search terms	Results
Google Scholar	CAR-T AND ambulatory AND (caregiver OR carer OR family)	809 Reviewed first 20 abstracts, sorted by relevance
PubMed		8
ResearchGate		>1000 Reviewed first 20 abstracts, sorted by relevance

Backwards snowballing was conducted to identify other relevant publications

Results

- Identified publications focused on US/European settings. Most fell into the following categories: guidance/educational material, expert opinion, literature review, learnings and perspectives from specialist cancer centers, caregiver-reported outcome/interview studies (caregiver sample n~7-100).
- The search did not identify any publications that directly assessed caregiver experiences of CAR-T in the ambulatory setting.
- One publication presented anecdotal evidence that caregivers preferred outpatient CAR-T monitoring due to effectiveness, efficiency, and flexibility.
- Some publications explored caregivers' general experiences of CAR-T, while others assessed caregiver experiences of inpatient versus outpatient oncology care, including in CAR-T-relevant indications.
- Several publications noted sources of caregiver burden during CAR-T, either generally or in the ambulatory setting; **Figure 1**.
- Continuous responsibilities**, leading to burnout
- Managing a high-risk patients' symptoms and side-effects**, despite limited caregiving expertise
- Financial losses** – potential lost wages, cost of living near hospital
- Housing upheaval**
- Prognostic uncertainty**
- Relationship strain** between patient and caregiver
- Work, lifestyle, and family interruptions**

Figure 1 Sources of CAR-T caregiver burden

- Publications expressed a need for caregiver education and support.
- Instruments used to assess caregiver burden in CAR-T are presented in **Figure 2**. These may also be suitable for specific use in the ambulatory setting.

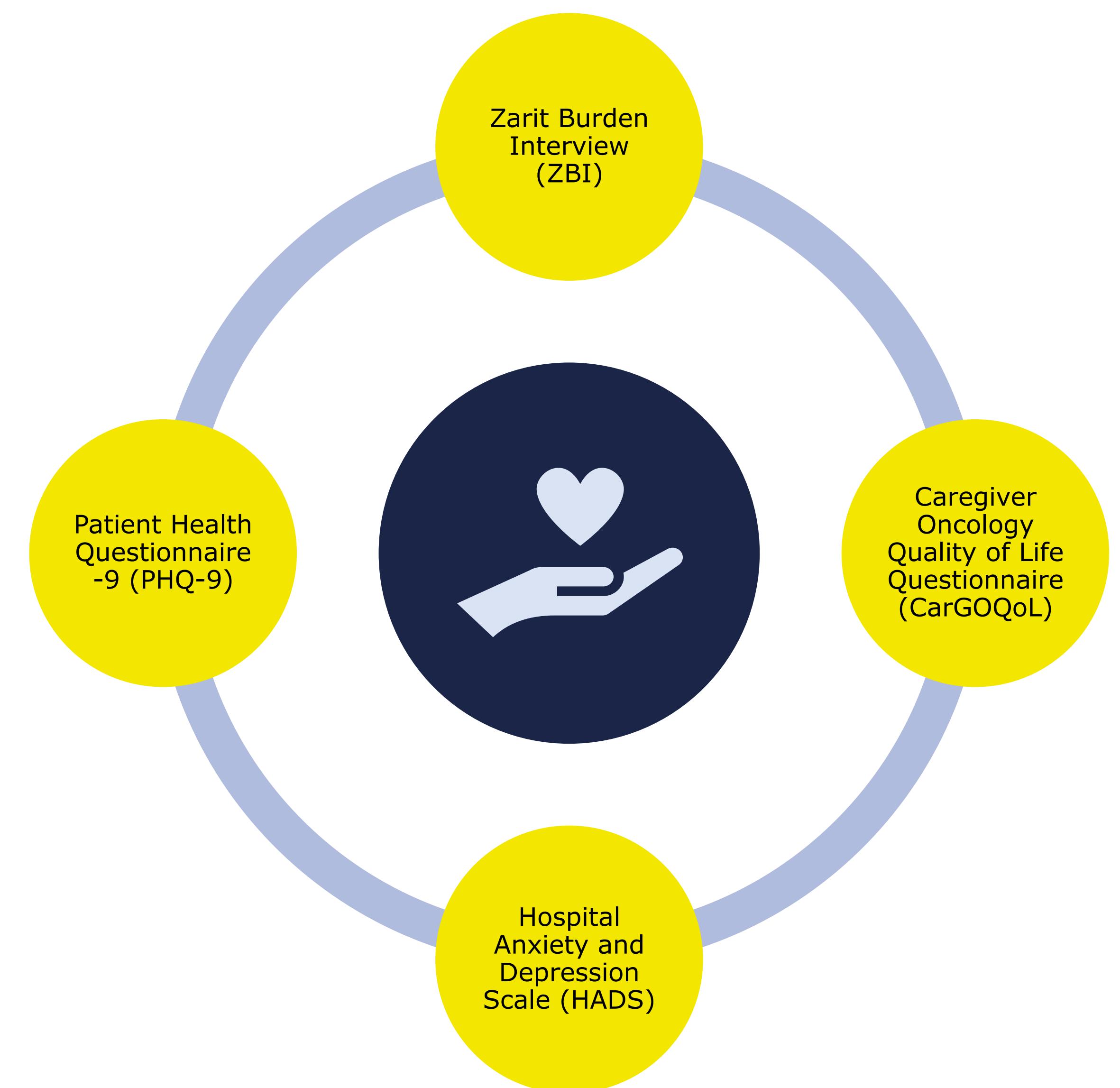


Figure 2 Instruments to assess caregiver burden around ambulatory CAR-T

Conclusions

- The absence of publications exploring caregiver experiences of CAR-T in the ambulatory setting suggests a research requirement to better understand caregivers' support needs.
- Identified studies that explored caregiver experiences in similar populations and treatment settings may prove useful in research design.
- Evidence of caregivers' support needs could inform resources and interventions.

Future Research Needs

- Research focusing on CAR-T in ambulatory settings and its impact on caregivers
- Caregiver-reported data about experiences, quality of life, and education & support needs
- Such research could inform key resources and targeted interventions

References

A list of all reviewed and included publications is available upon request.

Disclosure

CR, EB, and SL are employees of Vitaccess Limited. GP is an employee of Anthony Nolan.

Contact

Presenting author, Samuel Llewellyn: samuel.llewellyn@vitaccess.com.