

EHA-5348

## AMBULATORY DELIVERY OF BISPECIFIC ANTIBODIES IN RELAPSED/RELAPSED MULTIPLE MYELOMA (RRMM) VIA A VIRTUAL WARD PATHWAY: REDUCED INPATIENT BED-DAYS AND PRESERVED SAFETY

Type: Oral Presentation

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### Background

Bispecific antibodies (BsAbs) offer effective therapy for RRMM. The increased risk of cytokine release syndrome (CRS) and immune effector cell-associated neurotoxicity syndrome (ICANS) during step-up dosing initially needed inpatient monitoring, causing bed pressures, access delays, and patient burden. Our first-in-the-UK ambulatory care pathway using a Virtual Ward (VW), supported by early oral dexamethasone for grade 1 CRS, provides a safe outpatient strategy that optimises healthcare resources and reduces direct costs.

### Aims

To evaluate the impact of VW implementation (from 04/2025) on inpatient length of stay (LOS), bed-day utilisation, pathway efficiency, direct costs during BsAb priming, safety and CRS management in a real-world cohort.

### Methods

Retrospective UK single-centre analysis carried out 06/2022-01/2026, comparing pre-VW (n=21) vs post-VW (n=20) of 41 BsAb priming episodes in 39 patients. Endpoints included pathway utilisation (fully inpatient vs fully ambulatory/step-down/step-up), median LOS, actual vs expected inpatient bed-days, CRS/ICANS incidence and management, and barriers to ambulatory eligibility.

### Results

Median age was 64 years (range 48–82); 67% patients were male and 85% had prior autograft. Treatment comprised elranatamab (73%), teclistamab (22%), and talquetamab (5%). ISS was available at diagnosis in 41% of patients (I 12%, II 22%, III 7%). Cytogenetic risk was standard in 10% and adverse with  $\geq 1$  high-risk feature in 27% (data unavailable in 63%). Disease responses were: 46% CR, 24% VGPR, 12% progressive disease/deceased; 5% remain in early follow-up.

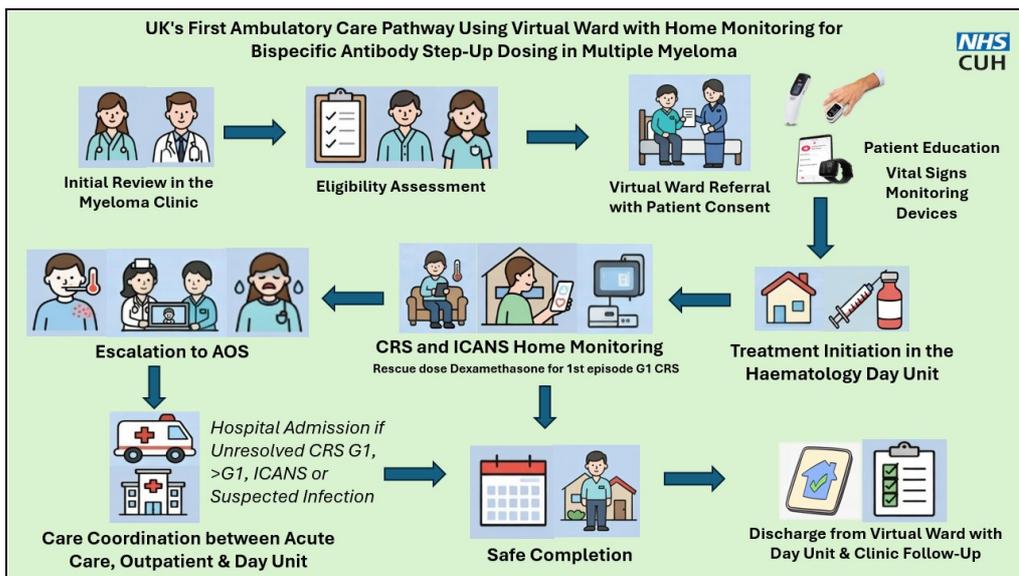
Before 04/2025 all 21 patients underwent inpatient step-up dosing (median LOS 8 days, IQR 6-10). After VW implementation, 20% (4/20) were fully ambulatory, 10% (2/20) transitioned from inpatient care to VW, and 15% (3/20) stepped up from VW to inpatient care; 65% (13/20) remained fully inpatient. Common eligibility barriers to VW ambulatory care included renal/organ dysfunction (n=3), living alone (n=2), distance/transport constraints (n=3), and clinical trial participation (n=1). Four patients eligible for VW chose full inpatient management.

Median post-VW median LOS was reduced to 6 days (IQR 0–9). Using the pre-pathway median inpatient LOS of 8 days, expected utilisation for 20 patients was 160 bed days. Observed utilisation was 110 bed days, corresponding to 50 inpatient bed days avoided and 31% reduction in inpatient bed-days. Based on institutional estimates (£350 per inpatient night vs £100 per VW night), this corresponds to an approximate direct cost saving of £12,500 across the post-VW cohort.

CRS occurred in 63% (26/41): 18% grade 1, 15% grade 2, 4% grade 3. No ICANS was observed. Post-VW, 89% of grade 1 CRS events were managed with early oral dexamethasone only (vs 33% pre-VW); 33% of CRS events managed entirely without admission. Tocilizumab use was low (17%).

### Summary/Conclusion

45% patients received ambulatory or step-down care following use of VW, reducing median inpatient LOS to save 50 bed-days and corresponding to an estimated £12,500 direct cost saving. Severe CRS was low, with 33% low-grade events managed with early oral dexamethasone alone without admission. As the first structured UK implementation of a VW pathway for BsAb priming, this practical and reproducible model can support increasing BsAb demand and constrained inpatient capacity, while highlighting the importance of addressing common eligibility barriers for broader adoption.



UK's First Ambulatory Care Pathway Using Virtual Ward with Home Monitoring for Bispecific Antibody Step-Up Dosing in Multiple Myeloma

**Keywords:** Multiple myeloma, Bispecific, Cost effectiveness, Quality of life