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# Completeness of Intervention Reporting in Mechanical Circulatory Support Studies: A Comparison of ClinicalTrials.gov Registrations and Published Reports

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**KEYWORDS:** heart failure, left ventricular assist devices, reporting.

**CITATION:** Cardiol Croat. 2026;21(11-12):264. | https://doi.org/10.15836/ccar2026.264

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**Introduction:** Durable left ventricular assist devices (LVADs) provide life-sustaining support for patients with advanced heart failure, either as a bridge to transplantation or as destination therapy. The complexity of mechanical circulatory support (MCS) devices, implantation, and management makes transparent reporting essential. The Template for Intervention Description and Replication (TIDieR) checklist supports standardized, reproducible descriptions of interventions[1]. This study aimed to evaluate the completeness of durable LVAD intervention reporting in ClinicalTrials.gov and corresponding publications.

**Patients and Methods:** We conducted a cross-sectional study of MCS studies registered at ClinicalTrials.gov. The initial search was performed on December 3, 2024, and updated on October 15, 2026, with deduplication. We included studies reporting on implantation of durable LVADs. Matching publications were sought in PubMed on October 15, 2026. An adapted TIDieR checklist[2] assessed 10 applicable items in registrations and 12 in publications.

**Results:** The initial and updated registry searches retrieved 3,671 and 6,487 records, respectively. The final sample included 53 unique studies: 17 (32.1%) randomized, and 33 (62.3%) industry-funded. Among included studies, 23 (43.4%) used a single-group design, 15 (28.3%) parallel groups, and one a crossover design. Only seven (13.2%) reported masking, including five quadruple-masked studies. Median enrollment was 48 (interquartile range [IQR], 24–144). Publications were identified for 25 studies (47.2%), although full texts were accessible for only 23. The median registry TIDieR score was 5.0 (IQR, 4.5–5.0) of 10, compared with 7.0 (IQR, 5.5–8.25) of 12 for publications. In 23 matched pairs, publications scored higher than registrations in total number of TIDieR items (median 6.5 [IQR, 5.5–7.25] versus 5.0 [IQR, 5.0–5.0]; p<0.001). Among publications, device characteristics were fully reported in 19 (82.6%), procedures in seven (30.4%), providers in five (21.7%), and planned fidelity in four (17.4%). Industry-funded studies had higher registry scores than others (5.0 versus 4.0; p=0.006; FDR q=0.042). Publication scores correlated inversely with enrollment (Spearman ρ=−0.55; p=0.007). Masking was less frequent among industry-funded interventional studies (p=0.030).

**Conclusion:** Publications describe MCS interventions more comprehensively than trial registrations, but procedural, provider-related, and fidelity details remain insufficient. Standardized reporting, alongside stronger oversight and incentives for comprehensive disclosure in both peer-reviewed publications and ClinicalTrials.gov, is needed to enhance transparency, improve reproducibility, and facilitate the translation of research findings into clinical practice.

**RECEIVED:**
**October 19, 2026**
**UPDATED:**
**November 4, 2026**

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