Frequently Asked Questions
VQI Survival, Reintervention, and Surveillance (SRS) Reports

Contents

Frequently Asked Questions

1. What is the inclusion/exclusion criteria for matching?
   a. Patients who were US residents enrolled in full parts A & B Medicare were eligible for matching. Canadians, patients with invalid or missing identifiers, and patients not enrolled in fee-for-service Medicare during the year of surgery were excluded.

2. How is VQI data from my center matched to Medicare claims?
   a. We worked with the VQI and Medicare data vendors to match patients using both direct and indirect matching methods. The direct linkage was created by General Dynamics Health Solutions, contracted with CMS to provide SSN – Beneficiary ID crosswalk. For VQI patients with invalid or missing SSNs, an indirect linkage based on a validated sequential algorithm using facility ID and state, patient date of birth, sex, procedure date, and zip code was used to match patients to Medicare claims. We then used a list of CPT, ICD9 and ICD10 codes to identify relevant procedures in Medicare claims. Finally, we used the procedure date from the VQI to identify the same procedure in Medicare (procedures that occurred between VQI admission and discharge dates in Medicare claims were identified as a "match"). These methods are described in detail in Mao et al, 2019 [i] and Hoel et al, 2017.[ii]

3. What years are included in the matched dataset?
   a. The current VQI-Medicare matched dataset contains all cases from the VQI between January 1, 2003 and December 21, 2018. Data for 2019 and after is not included in the matched data.

4. Why is there no data for my center?
   a. There are two possible reasons why some or all data may be missing for your center: 1) we were unable to match patients for whom the VQI has missing or invalid identifiers, Canadians, and those who are enrolled in Medicare Advantage; 2) CMS will not allow us to share this data for your center because there were fewer than 11 events in the matched dataset, thus this data was subjected to CMS's suppression policy.

5. Can you share the list of codes that were used to identify outcomes in Medicare?
   a. Our CPT, ICD-9 and ICD-10 coding algorithms are available upon request. Please contact Kayla Moore at Kayla.O.Moore@hitchcock.org to request the late outcomes coding algorithms.

6. How is reintervention after EVAR defined?
   a. Reintervention is defined as any open or endovascular procedure performed after the index operation which is related to the durability of the endovascular repair, common indications would include but are not limited to endoleak, migration, infection, and rupture. These reinterventions are defined in Columbo et al, 2019 [iii]

7. How is a surveillance failure after EVAR defined?
   a. A surveillance failure is defined as any fifteen-month period following an EVAR procedure in which abdominal imaging was not obtained, as described in Wanken et al, 2019.[iv]

8. How is overall survival defined?
   a. Overall survival is defined as the time from the date of the index procedure to date of death in Medicare.

i Mao J, Etkin CD, Lewallen DG, Sedrakyan A. Creation and Validation of Linkage Between Orthopedic Registry and Administrative Data Using Indirect Identifiers. The Journal of arthroplasty. 2019 Jun 1;34(6):1076-81.

ii Hoel AW, Faerber AE, Moore KO, Ramkumar N, Brooke BS, Scali ST, Sedrakyan A, Goodney PP. A pilot study for long-term outcome assessment after aortic aneurysm repair using Vascular Quality Initiative data matched to Medicare claims. J Vasc Surg. 2017 Sep;66(3):751-759.e1. PMID: 28222989; PMCID: PMC5561525.

iii Columbo JA, Kang R, Hoel AW, Kang J, Leinweber KA, Tauber KS, Hila R, Ramkumar N, Sedrakyan A, Goodney PP. A Comparison of Reintervention Rates After Endovascular Aneurysm Repair Between the Vascular Quality Initiative Registry, Medicare Claims, and Chart Review. J Vasc Surg. 2019 Jan;69(1):74-79.e6. doi: 10.1016/j.jvs.2018.03.423. Epub 2018 Jun 15. PMID: 29914838; PMCID: 6481637.

iv Wanken ZJ, Trooboff SW, Gladders B, Moore KO, Columbo JA, Ramkumar N, Stone DH, Austin AM, Mell MW, Sedrakyan A, Goodney PP. "Characterization of Endovascular Abdominal Aortic Aneurysm Repair Surveillance in the Vascular Quality Initiative." Circulation. 2020;141:866–868 Circulation. https://doi.org/10.1161/CIRCULATIONAHA.119.043625