EE516

Healthcare Resource Utilization and Time Burden in Patients With Myelodysplastic Syndromes/Neoplasms Initiating Oral Decitabine and Cedazuridine or Intravenous/Subcutaneous Hypomethylating Agents

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OBJECTIVE

- To assess real-world healthcare resource utilization (HCRU) and time burden in patients with myelodysplastic syndromes/neoplasms (MDS) receiving oral decitabine/cedazuridine (DEC-C) or intravenous/subcutaneous hypomethylating agents (IV/SC HMAs).

CONCLUSIONS

- Results from this large real-world study of patients with MDS suggest that treatment with oral DEC-C is characterized by fewer healthcare visits, including outpatient visits, and a lower time burden (ie, fewer MDS-related healthcare encounter days) than IV/SC HMAs.
- IV/SC administration of HMAs accounted for the largest difference in MDS-related healthcare encounter days between the cohorts.
- Improved characterization of the time burden associated with MDS treatment can enable clinicians to individualize treatment recommendations to align them with patients' preferences and goals of care.

Background

- MDS are a heterogenous group of myeloid cancers characterized by inadequate bone marrow hematopoiesis and a variable risk of progression to acute myeloid leukemia (AML).[1,2]
- HMAs are recommended for the treatment of adult patients with higher-risk MDS and are often used at lower doses in patients with lower-risk MDS after failure of other options.[3]
- DEC-C is the only oral HMA approved for higher-risk MDS, offering an alternative to IV/SC HMAs.[4,5]
- Evaluating the real-world HCRU and time burden associated with oral DEC-C and IV/SC HMAs is essential for informing treatment decisions, optimizing care delivery, and guiding health economic evaluations.

Methods

Study design

- This retrospective study using US claims data from the Komodo Healthcare Map database included patients with MDS treated with oral DEC-C or IV/SC HMAs between August 1, 2020, and May 31, 2024.
- Index date was defined as the first qualifying oral DEC-C or IV/SC HMA claim.
- A baseline period of 6 months prior to the index date was used to characterize the study population.
- Patients were followed from their index date until death, disenrollment, or the end of the study period—whichever occurred first.

Patients and cohorts

- Patients were included if they met the following criteria:
  - ≥1 claim for an HMA between August 1, 2020, and May 31, 2024.
  - ≥1 diagnosis claim for MDS in the 6 months prior to, or 30 days after, the index date.
  - No evidence of HMA utilization during the baseline period.
  - No other primary cancer diagnoses (except AML or chronic myelomonocytic leukemia [CMML]) prior to the index date.
  - Aged ≥18 years at index date.
  - ≥6 months of continuous medical and pharmacy enrollment before and after the index date.
- Index cohorts were defined as (1) patients receiving oral DEC-C and (2) patients receiving IV/SC HMA.

Outcomes and statistical analyses

- Patient demographics were evaluated at index, and clinical characteristics were evaluated during the baseline period.
- All-cause and MDS-related healthcare visits per patient per month (PPPM) were evaluated during postindex follow-up. MDS-related HCRU was captured by claims with an MDS diagnosis in any (primary or secondary) diagnosis position.
- MDS-related healthcare encounter days PPPM were evaluated during the postindex follow-up period (as a measure of time burden).
- Continuous variables were described using means, SD, medians, and ranges, whereas frequencies and percentages were used for categorical variables.
- Propensity score matching was used to balance baseline patient characteristics (age, sex, race/ethnicity, geographical region, payer, index year, Charlson Comorbidity Index [CCI], and prior AML or CMML) between oral DEC-C and IV/HMA cohorts.

Results

Study population and patient characteristics

- Following propensity score matching, 292 patients were included in the matched oral DEC-C and IV/SC HMA cohorts.
- After matching, median age was 74.0 years, and 62.7% of patients were male in both cohorts; 71.2% of patients in the oral DEC-C cohort and 69.5% in the IV/SC HMA cohort were White (**Table 1**).

Table 1. Patient demographics at index

Demographic	Oral DEC-C (n=292)	IV/SC HMA (n=292)
Age, median (IQR), years	74.0 (66.0-80.0)	74.0 (67.0-79.0)
Age group, n (%), years		
18-44	9 (3.1)	4 (1.4)
45-64	55 (18.8)	59 (20.2)
65-74	84 (28.8)	91 (31.2)
75-84	114 (39.0)	105 (36.0)
≥85	30 (10.3)	33 (11.3)
Sex, n (%)		
Female	106 (36.3)	107 (36.6)
Male	183 (62.7)	183 (62.7)
Unknown	3 (1.0)	2 (0.7)
Race/ethnicity, n (%)		
White	208 (71.2)	203 (69.5)
Asian or Pacific Islander	22 (7.5)	17 (5.8)
Black or African American	19 (6.5)	20 (6.8)
Hispanic or Latino	20 (6.8)	22 (7.5)
Other/unknown	23 (7.9)	30 (10.3)
Payer, n (%)		
Commercial	63 (21.6)	63 (21.6)
Medicaid	19 (6.5)	12 (4.1)
Medicare Advantage	194 (66.4)*	208 (71.2)
Medicare FFS	16 (5.5)*	9 (3.1)
Other/unknown	0	0
Region, n (%)		
Midwest	78 (26.7)	76 (26.0)
Northeast	92 (31.5)	91 (31.2)
South	78 (26.7)	75 (25.7)
West	43 (14.7)	50 (17.1)
Unknown	1 (0.3)	0
Index year, n (%)		
2020	19 (6.5)	15 (5.1)
2021	72 (24.7)	84 (28.8)
2022	84 (28.8)	83 (28.4)
2023	90 (30.8)	77 (26.4)
2024	27 (9.2)	33 (11.3)

*Denotes standardized mean difference >0.1.
DEC-C, decitabine and cedazuridine; FFS, fee-for-service; HMA, hypomethylating agents; IV/SC, intravenous/subcutaneous.

- After matching, median CCI score was 1.0 for both cohorts; peripheral vascular disease, renal disease, and congestive heart failure were the most common comorbidities in both cohorts (**Table 2**).
  - 6.5% of patients treated with oral DEC-C and 5.1% of patients treated with IV/SC HMA had received prior treatment for AML.

Table 2. Clinical characteristics during the 6-month preindex baseline period

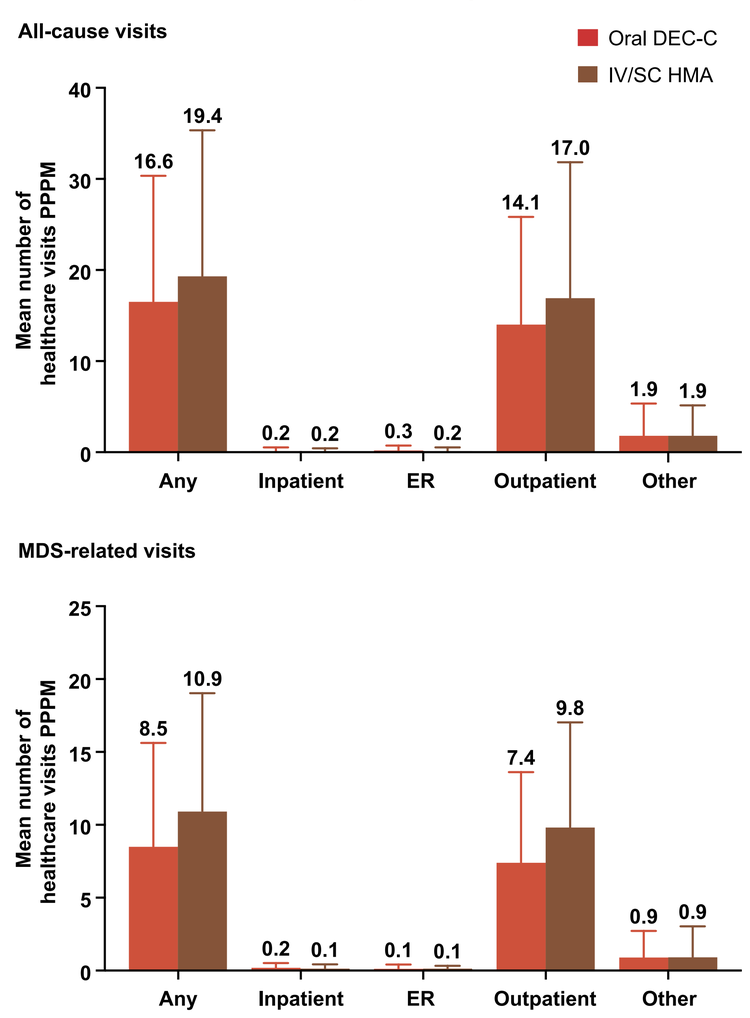
Characteristic	Oral DEC-C (n=292)	IV/SC HMA (n=292)
CCI, median (IQR)	1.0 (0.0-3.0)	1.0 (0.0-3.0)
Comorbidities included in the CCI, n (%)[a]		
Peripheral vascular disease	77 (26.4)	69 (23.6)
Renal disease	70 (24.0)	72 (24.7)
Congestive heart failure	61 (20.9)	61 (20.9)
Chronic pulmonary disease	53 (18.2)	63 (21.6)
Diabetes (with chronic complication)	53 (18.2)	48 (16.4)
Cerebrovascular disease	42 (14.4)*	25 (8.6)
Diabetes (without chronic complication)	31 (10.6)	36 (12.3)
Mild liver disease	29 (9.9)	36 (12.3)
Prior cancer, n (%)		
AML	19 (6.5)	15 (5.1)
CMML	12 (4.1)	11 (3.8)

*Denotes standardized mean difference >0.1.
[a]Only comorbidities observed in >10% of patients in either cohort are presented here.
AML, acute myeloid leukemia; CCI, Charlson Comorbidity Index; CMML, chronic myelomonocytic leukemia; DEC-C, decitabine and cedazuridine; HMA, hypomethylating agents; IV/SC, intravenous/subcutaneous.

HCRU during follow-up

- Mean (SD) follow-up was 356.2 (307.4) days for the oral DEC-C cohort and 361.1 (308.7) days for the IV/SC HMA cohort.
- Mean (SD [median]) total all-cause healthcare visits PPPM during follow-up was 16.6 (13.8 [13.1]) for the oral DEC-C cohort vs 19.4 (16.0 [15.2]) for the IV/SC HMA cohort (**Figure 1**).
- This included mean outpatient visits (14.1 vs 17.0), inpatient admissions (0.2 vs 0.2), and emergency room (ER) visits (0.3 vs 0.2).
- Mean (SD [median]) total MDS-related visits PPPM was 8.5 (7.1 [6.5]) for the oral DEC-C cohort vs 10.9 (8.1 [9.3]) in the IV/SC HMA cohort.
- This included mean MDS-related outpatient (7.4 vs 9.8), inpatient (0.2 vs 0.1), and ER visits (0.1 vs 0.1).

Figure 1. Mean number of all-cause and MDS-related healthcare visits PPPM during follow-up

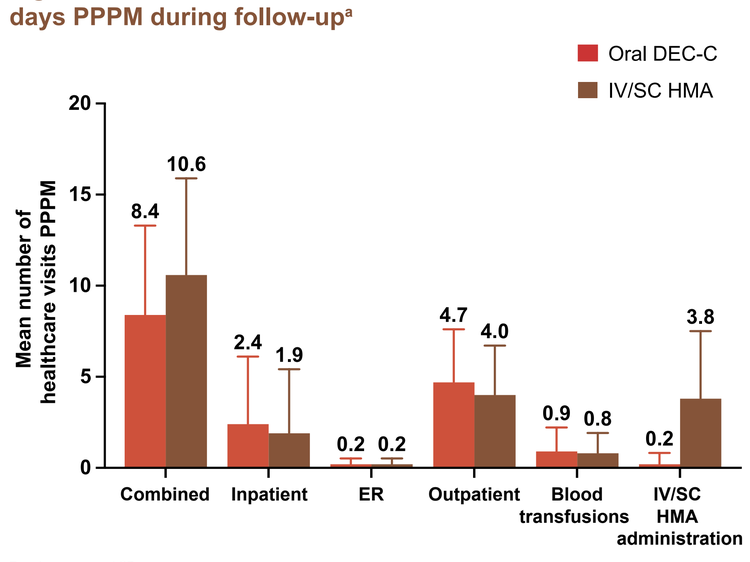


Error bars represent SD.
DEC-C, decitabine and cedazuridine; ER, emergency room; HMA, hypomethylating agents; IV/SC, intravenous/subcutaneous; MDS, myelodysplastic syndromes/neoplasms; PPPM, per patient per month.

Healthcare encounter days during follow-up

- Mean (SD [median]) total MDS-related healthcare encounter days PPPM were 8.4 (4.9 [7.8]) for patients in the oral DEC-C cohort vs 10.6 (5.3 [9.6]) for patients in the IV/SC HMA cohort (**Figure 2**).
- Most mean MDS-related healthcare encounter days were in the outpatient setting in both cohorts (4.7 vs 4.0 encounter days PPPM).
- Patients in the IV/SC HMA cohort had a mean of 3.8 parenteral HMA administration encounter days PPPM.

Figure 2. Mean number of MDS-related healthcare encounter days PPPM during follow-up[a]



Error bars represent SD.
[a]To include only distinct encounter days, healthcare encounters were de-duplicated by date using a tiered approach (inpatient admission > ER visits > HMA administration > transfusion events > outpatient visits).
DEC-C, decitabine and cedazuridine; ER, emergency room; HMA, hypomethylating agents; IV/SC, intravenous/subcutaneous; MDS, myelodysplastic syndromes/neoplasms; PPPM, per patient per month.

Limitations

- This retrospective study used claims data, which are subject to coding errors and incomplete information that can result in misclassification of treatments and outcomes.
- This study may not have captured patients' first exposure to HMAs, as prior treatments—particularly IV/SC HMAs—may have been administered before the observed treatment date.
- Because laboratory test results were not evaluated as part of this study, patients could not be classified as having higher- or lower-risk MDS based on the International Prognostic Scoring System or International Prognostic Scoring System-Revised scoring systems.

References

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