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Financial Implications of Early Hospital Discharge After AML-Like Induction Chemotherapy: A 4-Year Retrospective Analysis

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eTable 1. Characteristics of EHD and Inpatient Control Patients With Blood Count Recovery

Parameter	EHD Cohort n (%)	Inpatient Cohort n (%)	*P* Value
Total, N	153	41	
Patient demographics			
Age, mean (range), y	56 (18–79)	58 (25–80)	.15
Sex			.48
Female	68 (44)	21 (51)	
Male	85 (56)	20 (49)	
Travel time to outpatient clinic, mean (range), min	21 (1–124)	63 (4–155)	<.001
Insurance type			.40
Medicare	56 (37)	20 (49)	
Medicaid	18 (12)	6 (15)	
Private	66 (43)	13 (32)	
Other	13 (8)	2 (5)	
Disease characteristics			
Disease			.24
AML	124 (81)	37 (90)	
MDS	29 (19)	4 (10)	
Secondary disease	46 (30)	7 (17)	.12
Cytogenetic risk			.016
Favorable	20 (14)	11 (30)	
Intermediate-1	47 (34)	16 (43)	
Intermediate-2	30 (21)	2 (5)	
Adverse	43 (31)	8 (22)	
Chemotherapy administered			.014
HiDAC-containing regimens	148 (97)	36 (88)	
7 + 3 (± additional drug)	5 (3)	3 (7)	
Cytarabine/Decitabine[a]	0 (0)	2 (5)	
Clinical/Laboratory findings at baseline			
Performance status			.0011
0–1	133 (87)	26 (63)	
2–4	20 (13)	15 (37)	
Creatinine, mg/dL	0.89 (0.39–4.36)	0.85 (0.47–2.51)	.23
Total bilirubin, mg/dL	0.81 (0.2–7.7)	0.78 (0.3–3)	.66
Albumin, g/dL	3.89 (2.3–5)	3.43 (2.3–4.2)	<.001
WBC count, thousand/microL	20.08 (0.39–261.48)	32.15 (0.47–144.96)	.018
% peripheral blood blasts	24 (0–97)	29.78 (0–94)	.078
TRM score	3.88 (0–24.22)	8.56 (0.3–42.02)	.0011

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eTable 1. Characteristics of EHD and Inpatient Control Patients With Blood Count Recovery (cont.)

Parameter	EHD Cohort n (%)	Inpatient Cohort n (%)	*P* Value
Clinical/Laboratory findings postchemotherapy			
Performance status			<.001
0–1	137 (90)	18 (44)	
2–4	16 (10)	23 (56)	
Creatinine, mg/dL	0.71 (0.32–2.65)	0.72 (0.25–2.71)	.37
Total bilirubin, mg/dL	0.98 (0.2–5.1)	1.12 (0.3–2.6)	.049
Albumin, g/dL	3.56 (2.1–5)	3.04 (1.9–3.9)	<.001
WBC count, thousand/microL	0.89 (0–19.79)	0.68 (0–14.73)	.14
% peripheral blood blasts	1.35 (0–46)	0.73 (0–30)	.19
TRM score	5.77 (0.34–28.12)	14.21 (1.23–77.63)	<.001
Treatment response			.36
No CR/CRi	12 (8)	5 (12)	
CR or CRi	141 (92)	36 (88)	

Abbreviations: AML, acute myeloid leukemia; CR, complete remission; CRi, complete remission with incomplete hematologic recovery; EHD, early hospital discharge; HiDAC, high-dose cytarabine; MDS, myelodysplastic syndromes; TRM, treatment-related mortality; WBC, white blood cell.
[a]Cytarabine, 100 mg/m^2 × 7 days, and decitabine, 20 mg/m^2 × 10 days.

eTable 2. Safety and Resource Utilization of EHD and Inpatient Control Patients With Blood Count Recovery

Parameter	EHD Cohort Mean (Range)	Inpatient Cohort Mean (Range)	*P* Value
Total, N	153	41	
Days on study	22.81 (14–41)	18.56 (5–34)	<.001
Days as inpatient	6.10 (0–25)	18.56 (5–34)	<.001
Days as outpatient	16.71 (3–38)	—	—
Time spent as outpatient, %	72.45 (11–100)	—	—
Number of readmissions	1.08 (0–3)	—	—
Days in ICU	0.14 (0–8)	0.59 (0–11)	.067
Study days spent in ICU, %	0.70 (0–38.10)	3.09 (0–57.89)	.067
Early death, n (%)			
No early death	151 (99)	40 (98)	.51
Died ≤30 days after start of study	2 (1)	1 (2)	—
Physician visits per outpatient study day	0.06 (0–0.33)	—	—
RN/APP visits per outpatient study day	0.10 (0–0.50)	—	—
Outpatient laboratory visits per outpatient study day	0.44 (0–1.00)	—	—
ED visits per study day	0.04 (0–0.16)		
Study days on IV antimicrobials, %	36.84 (0–100)	52.22 (0–100)	.01
RBC transfusions per study day			
Total	0.27 (0.04–0.80)	0.40 (0.13–0.92)	<.001
Inpatient	0.61 (0–2.33)	0.40 (0.13–0.92)	<.001
Outpatient	0.15 (0–0.65)	—	—
Platelet transfusions per study day			
Total	0.24 (0.04–1.06)	0.41 (0.10–1.20)	<.001
Inpatient	0.38 (0–2.33)	0.41 (0.10–1.20)	.19
Outpatient	0.19 (0–1.00)	—	—

Abbreviations: APP, advanced practice provider; ED, emergency department; EHD, early hospital discharge; ICU, intensive care unit; IV, intravenous; RBC, red blood cell; RN, registered nurse

eTable 3. Charges per Day for EHD and Inpatient Control Patients With Blood Count Recovery

Charge Category	EHD Cohort Charges per Day (Range), USD	Inpatient Cohort Charges per Day (Range), USD	*P* Value
Total, N	153	139	
All categories			
Combined	3,826 (905–9,954)	8,404 (4,596–26,320)	<.001
Inpatient only	8,119 (4,828–16,068)	8,404 (4,596–26,320)	.59
Facility/Provider			
Combined	1,214 (104–4,060)	3,592 (2,806–9,907)	<.001
Inpatient only	3,419 (1,693–6,410)	3,592 (2,806–9,907)	.14
Emergency department			
Combined	103 (0–480)	0 (0–0)	<.001
Transfusion			
Combined	1,111 (225–3,780)	1,875 (628–7,933)	<.001
Inpatient only	1,667 (306–6,299)	1,875 (628–7,933)	.39
Laboratory/Pathology			
Combined	686 (87–2,398)	916 (338–3,031)	.0037
Inpatient only	993 (307–2,897)	916 (338–3,031)	.15
Imaging			
Combined	172 (0–852)	333 (0–1,708)	.038
Inpatient only	502 (0–2,904)	333 (0–1,708)	.011
Pharmacy			
Combined	497 (10–1,797)	1,538 (130–3,330)	<.001
Inpatient only	1,531 (265–3,500)	1,538 (130–3,330)	.42
Miscellaneous			
Combined	72 (0–598)	150 (0–991)	.43
Inpatient only	86 (0–1,217)	150 (0–991)	.0012

Abbreviation: EHD, early hospital discharge.

eTable 4. Characteristics of Medically Matched EHD and Inpatient Control Patients

Parameter	EHD Cohort n (%)	Inpatient Cohort n (%)	*P* Value
Total, N	152	49	
Patient demographics			
Age, mean (range), y	56.31 (18–83)	54.92 (24–90)	.65
Sex			.19
Female	60 (40)	25 (51)	
Male	90 (60)	24 (49)	
Travel time to outpatient clinic, mean (range), min	17.27 (1–58)	53.32 (2–155)	<.001
Insurance type			.11
Medicare	57 (38)	22 (45)	
Medicaid	18 (12)		11 (22)
Private	62 (41)		12 (24)
Other	13 (9)		4 (8)
Disease characteristics			.026
Disease	122 (80)	46 (94)	
AML	30 (20)	3 (6)	
MDS	49 (33)	17 (35)	
Secondary disease			.86
Cytogenetic risk			.43
Favorable	16 (12)	9 (20)	
Intermediate-1	44 (32)	16 (36)	
Intermediate-2	31 (23)	7 (16)	
Adverse	45 (33)	13 (29)	
Chemotherapy administered[a]			.40
HiDAC-containing regimens	142 (95)	45 (92)	
7 + 3 (± additional drug)	6 (4)	2 (4)	
Cytarabine/Decitabine[a]	2 (1)	2 (4)	
Clinical/Laboratory findings at baseline			
Performance status			1.00
0–1	144 (96)	47 (96)	
2–4	6 (4)	2 (4)	
Creatinine, mg/dL	0.91 (0.48–4.36)	0.9 (0.47–1.48)	.51
Total bilirubin, mg/dL	0.79 (0.2–2.9)	0.67 (0.3–1.6)	.23
Albumin, g/dL	3.89 (2.5–5.0)	3.7 (2.5–4.7)	.0062
WBC count, thousand/microL	17.47 (0.39–261.48)	34.33 (0.62–247.93)	.0052
% peripheral blood blasts	21.57 (0–97)	35.2 (0–97)	.0022
TRM score	3.32 (0–16.80)	4.58 (0–32.15)	.41
Clinical/Laboratory findings postchemotherapy			
Creatinine, mg/dL	0.73 (0.35–2.65)	0.72 (0.40–1.41)	.54
Total bilirubin, mg/dL	0.95 (0.2–3.0)	0.8 (0.3–2.6)	.20
Albumin, g/dL	3.55 (2.1–5.0)	3.37 (2.4–4.6)	.023
WBC count, thousand/microL	1.14 (0–37.20)	0.75 (0–9.38)	.41
% peripheral blood blasts	1.43 (0–46)	0.84 (0–38)	.30
TRM score	5.25 (0.34–13.56)	5.55 (0.11–16.26)	.75

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eTable 4. Characteristics of Medically Matched EHD and Inpatient Control Patients (cont.)

Parameter	EHD Cohort n (%)	Inpatient Cohort n (%)	*P* Value
Treatment response			.004
No CR/CRi	24 (16)	18 (37)	
CR/CRi	128 (84)	31 (63)	
Off-study reason			<.001
Blood count recovery	130 (87)	15 (31)	
Day 42	8 (5)	1 (2)	
Death	4 (3)	0 (0)	
Hospital discharge	0 (0)	31 (63)	
New AML therapy	6 (4)	2 (4)	
Transfer of care to outside facility	2 (1)	0 (0)	

Abbreviations: AML, acute myeloid leukemia; EHD, early hospital discharge; CR, complete remission; CRi, complete remission with incomplete hematologic recovery; HiDAC, high-dose cytarabine; MDS, myelodysplastic syndromes; TRM, treatment-related mortality; WBC, white blood cell.
[a]Cytarabine, 100 mg/m^2 x 7 days, and decitabine, 20 mg/m^2 x 10 days.

eTable 5. Safety and Resource Utilization of Medically Matched EHD and Inpatient Control Patients

Parameter	EHD Cohort Mean (Range)	Inpatient Cohort Mean (Range)	*P* Value
Total, N	152	49	
Days on study	24.00 (6–42)	15.98 (3–42)	<.001
Days as inpatient	6.24 (0–25)	15.98 (3–42)	<.001
Days as outpatient	17.76 (1–42)	—	—
Time spent as outpatient, %	72.38 (11–100)	—	—
Number of readmissions	1.10 (0–3)	—	—
Days in ICU	0.25 (0–16)	0 (0–0)	.08
Study days spent in ICU, %	1.01 (0–38.1)	0 (0–0)	.08
Early death, n (%)			.34
No early death	147 (97)	49 (100)	
Died ≤30 days after start of study	5 (3)	0 (0)	
Physician visits per outpatient study day	0.06 (0–0.33)	—	—
RN/APP visits per outpatient study day	0.10 (0–0.50)	—	—
Outpatient laboratory visits per outpatient study day	0.45 (0–1.00)	—	—
ED visits per study day	0.04 (0–0.17)	—	—
Study days on IV antimicrobials, %	37.05 (0–100)	40.90 (0–100)	.71
RBC transfusions per study day			
Total	0.27 (0.04–0.80)	0.40 (0–1.00)	<.001
Inpatient	0.60 (0–1.50)	0.40 (0–1.00)	<.001
Outpatient	0.16 (0–0.75)	—	—
Platelet transfusions per study day			
Total	0.24 (0.04–1.06)	0.4 (0.09–1.38)	<.001
Inpatient	0.38 (0–1.27)	0.4 (0.09–1.38)	1.00
Outpatient	0.19 (0–1.00)	—	—

Abbreviations: APP, advanced practice provider; ED, emergency department; EHD, early hospital discharge; ICU, intensive care unit; IV, intravenous; RBC, red blood cell; RN, registered nurse.

eTable 6. Characteristics of Medically Matched EHD and Inpatient Control Patients With Blood Count Recovery

Parameter	EHD Cohort n (%)	Inpatient Cohort n (%)	*P* Value
Total, N	130	15	
Patient demographics			
Age, mean (range), y	55 (18–79)	51 (25–73)	.70
Sex			.18
Female	54 (42)	9 (60)	
Male	76 (58)	6 (40)	
Travel time to outpatient clinic, mean (range), min	17 (1–58)	89 (28–155)	<.001
Insurance type			.37
Medicare	47 (36)	7 (47)	
Medicaid	14 (11)	3 (20)	
Private	56 (43)	5 (33)	
Other	13 (10)	0 (0)	
Disease characteristics			
Disease			.30
AML	104 (80)	14 (93)	
MDS	26 (20)	1 (7)	
Secondary disease	40 (31)	3 (20)	.55
Cytogenetic risk			.021
Favorable	16 (14)	5 (38)	
Intermediate-1	39 (33)	6 (46)	
Intermediate-2	26 (22)	0 (0)	
Adverse	37 (31)	2 (15)	
Chemotherapy administered			.12
HiDAC-containing regimens	126 (97)	13 (87)	
7 + 3 (± additional drug)	4 (3)	2 (13)	
Clinical/Laboratory findings at baseline			
Performance status			.54
0–1	124 (95)	14 (93)	
2–4	6 (5)	1 (7)	.18
Creatinine, mg/dL	0.90 (0.48–4.36)	0.78 (0.47–1.25)	.86
Total bilirubin, mg/dL	0.78 (0.2–2.9)	0.77 (0.3–1.6)	.063
Albumin, g/dL	3.9 (2.5–5.0)	3.7 (2.9–4.2)	.022
WBC count, thousand/microL	16.58 (0.39–261.48)	28.01 (1.83–138.44)	.022
% peripheral blood blasts	21.19 (0–97)	34.27 (0–93)	.99
TRM score	3 (0–16.80)	3.14 (0.3–10.96)	.54

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eTable 6. Characteristics of Medically Matched EHD and Inpatient Control Patients With Blood Count Recovery (cont.)

Parameter	EHD Cohort n (%)	Inpatient Cohort n (%)	*P* Value
Clinical/Laboratory findings postchemotherapy			
Creatinine, mg/dL	0.72 (0.32–2.65)	0.63 (0.40–1.00)	.16
Total bilirubin, mg/dL	0.94 (0.2–3.0)	1.00 (0.3–2.6)	.64
Albumin, g/dL	3.56 (2.1–5.0)	3.21 (2.7–3.8)	.0035
WBC count, thousand/microL	0.83 (0–19.79)	0.39 (0–2.19)	.56
% peripheral blood blasts	1.41 (0–46)	0 (0–0)	.27
TRM score	4.85 (0.34–13.56)	4.82 (1.23–9.26)	1.00
Treatment response			.28
No CR/CRi	8 (6)	2 (13)	
CR or CRi	122 (94)	13 (87)	

Abbreviations: AML, acute myeloid leukemia; CR, complete remission; CRi, complete remission with incomplete hematologic recovery; EHD, early hospital discharge; HiDAC, high-dose cytarabine; MDS, myelodysplastic syndromes; TRM, treatment-related mortality; WBC, white blood cell.

eTable 7. Safety and Resource Utilization of Medically Matched EHD and Inpatient Control Patients With Blood Count Recovery

Parameter	EHD Cohort Mean (Range)	Inpatient Cohort Mean (Range)	*P* Value
Total, N	130	15	
Days on study	22.62 (14–38)	18.2 (5–28)	.0021
Days as inpatient	5.91 (0–25)	18.2 (5–28)	<.001
Days as outpatient	16.72 (3–38)	—	—
Time spent as outpatient, %	72.97 (11–100)	—	—
Number of readmissions	1.08 (0–3)	—	—
Days in ICU	0.15 (0–8)	0 (0–0)	.44
Study days spent in ICU, %	0.75 (0–38.1)	0 (0–0)	.44
Early death, n (%)			
No early death	128 (98)	15 (100)	1.00
Died ≤30 days after start of study	2 (2)	0 (0)	
Physician visits per outpatient study day	0.06 (0–0.33)	—	—
RN/APP visits per outpatient study day	0.10 (0–0.50)	—	—
Outpatient laboratory visits per outpatient study day	0.44 (0–1.00)	—	—
ED visits per study day	0.04 (0–0.16)		
Study days on IV antimicrobials, %	36.76 (0–100)	40.13 (0–100)	.69
RBC transfusions per study day			
Total	0.27 (0.04–0.80)	0.37 (0.13–0.83)	.026
Inpatient	0.60 (0–1.50)	0.37 (0.13–0.83)	<.001
Outpatient	0.15 (0–0.65)	—	—
Platelet transfusions per study day			
Total	0.23 (0.04–1.06)	0.23 (0.10–0.56)	.94
Inpatient	0.35 (0–1.27)	0.23 (0.10–0.56)	.044
Outpatient	0.18 (0–1.00)	—	—

Abbreviations: APP, advanced practice provider; ED, emergency department; EHD, early hospital discharge; ICU, intensive care unit; IV, intravenous; RBC, red blood cell; RN, registered nurse

eTable 8. Charges per Day for Medically Matched EHD Versus Inpatient Control Patients With Blood Count Recovery

Charge Category	EHD Cohort (n=130) Charges per Day (Range), USD	Inpatient Cohort (n=15) Charges per Day (Range), USD	*P* Value
Total, N	130	15	
All categories			
Combined	3,792 (905–9,954)	6,429 (4,596–8,342)	<.001
Inpatient only	8,076 (4,828–16,068)	6,429 (4,596–8,342)	<.001
Facility/Provider			
Combined	1,200 (104–4,060)	3,331 (3,034–3,758)	<.001
Inpatient only	3,417 (1,693–6,410)	3,331 (3,034–3,758)	.81
Emergency department			
Combined	103 (0–480)	0 (0–0)	<.001
Transfusion			
Combined	1,091 (225–3,780)	1,216 (628–2,181)	.23
Inpatient only	1,604 (306–3,768)	1,216 (628–2,181)	.031
Laboratory/Pathology			
Combined	694 (87–2,398)	721 (353–1,195)	.52
Inpatient only	1,001 (307–2,897)	721 (353–1,195)	.018
Imaging			
Combined	167 (0–852)	79 (0–335)	.11
Inpatient only	526 (0–2,904)	79 (0–335)	<.001
Pharmacy			
Combined	494 (10–1,797)	1,018 (130–1,611)	<.001
Inpatient only	1,538 (265–3,500)	1,018 (130–1,611)	<.001
Miscellaneous			
Combined	71 (0–598)	65 (0–623)	.0023
Inpatient only	75 (0–1,217)	65 (0–623)	.58

Abbreviation: EHD, early hospital discharge.