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Impact of palliative care consultations for patients admitted to Maine Medical Center with acute exacerbations of COPD

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Background/Purpose

- COPD is the 3rd leading cause of death.
- Specialty Palliative Care (PC) is underutilized in COPD patients.
- PC involvement has been shown to improve quality of life and satisfaction with overall care.
- We sought to evaluate the association of receipt of palliative medicine consultation during an admission for acute exacerbation of COPD with a documented Goals of Care conversations and/or presence of an advanced directive and/or POLST.

Methods

- 463 patients were identified as meeting criteria for being admitted to MMC for an acute COPD exacerbation between 07/01/2015 and 7/01/2018.
- Index admissions were defined as:
  - If seen by PC: the first admission with a PC consult was considered the index admission.
  - If never seen by PC: the first admission within the study period was the index
- Patient characteristics included age, gender, race and insurance status.
- Disease severity was measured by risk of mortality, a standardized measure of illness severity, as well as number of all-cause and COPD specific admissions in the six months prior to index admission.
- Responses to the two different Surprise Questions were available for a subset of the cohort:
  - The 30-day Surprise Question: "Would you be surprised if this patient died within the next 30 days?," was answered by the emergency room physician for 83% of patients (n=383).
  - The 1-year Surprise Question: "Would you be surprised if this patient died within the next year?" was answered by an admitting physician for 78% of patients (n=361).
- For the primary outcome of goals of care conversations, all physician notes (including consult notes) were read thoroughly for documentation of goals of care discussion.
- We also noted if there was a POLST or AD form in the chart within six months of the index admission.
- Code status on admission and on discharge was recorded.
- A subgroup analysis was performed on those patients with positive responses to the surprise question, eg the physician would NOT be surprised if the patient died.

Results

Table 1. Patient characteristics (n=463)

	Number	Percent
Age		
≤ 55	59	13
56-65	126	27
66-75	131	28
76-85	111	24
86+	36	8
Gender		
Male	229	50
Female	234	50
Insurance		
Commercial	54	12
Medicare	340	73
Medicaid	42	9
VA	11	2
Self	16	4
Comorbidities		
CHF	159	34
PH/ILD	35	8
Dementia	33	7
Lung Cancer	41	9
Other malignancy	51	11
Risk of Mortality		
Mild	66	14
Mod	80	17
Major	238	52
Extreme	77	17

Table 2. Patient characteristics based on receipt of palliative care.

	No PCC		PCC		P-Value
	Number	%	Number	%	
Age					0.73
≤ 55	47	14	12	10	
56-65	92	26	34	30	
66-75	95	27	36	31	
76-85	87	25	24	21	
86+	27	8	9	8	
Gender					0.61
Male	175	50	54	47	
Female	173	50	61	53	
ROM					0.02
Mild	55	16	11	10	
Mod	64	19	16	14	
Major	179	52	59	51	
Extreme	48	14	29	25	
COPD admit 6 months prior					<0.0001
0	309	89	61	53	
1	32	9	26	23	
2	6	2	13	11	
3 or more	1	0.3	15	13	

Table 3. Disposition based on receipt of PC

	No PCC		PCC		p-value
Disposition	Number	Percent	Number	Percent	<0.0001
Home	168	50	24	22	
Home with services	94	28	26	24	
Hospice	4	1	13	12	
Other facility	71	21	44	41	

Figure 1. Code status on discharge based on receipt of PC.

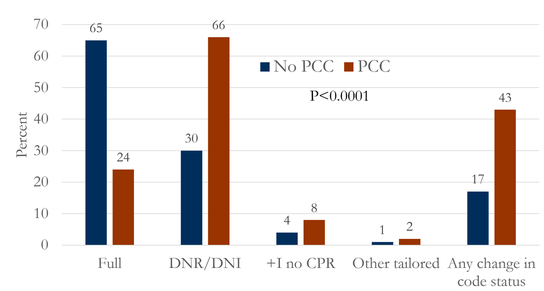
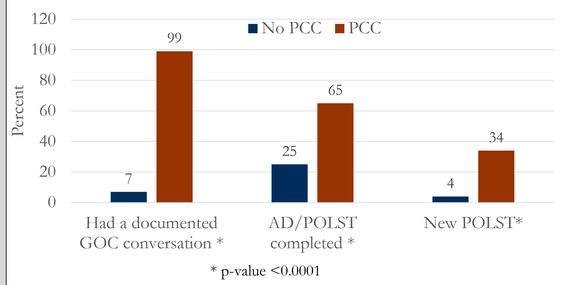


Figure 2. Documented goals of care conversations and AD/POLST completion based on receipt of PC.



Subgroup analysis for patients with a positive SQ

Figure 3. Goals of Care Conversations and AD/POLST completion based on receipt of PC for patients with positive 1-year Surprise Question.

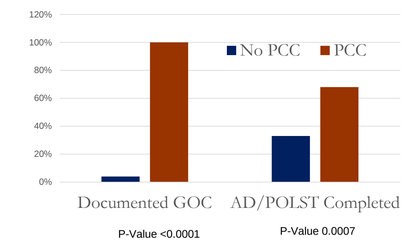
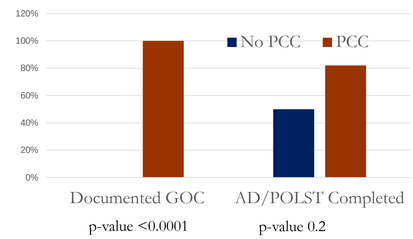


Figure 4. Goals of Care Conversations and AD/POLST completion for patients with a positive 30-day Surprise Question.



Results from Multivariate Regression Models

- Patients with a PC consultations were 5.7 times more likely to have an AD/POLST completed within 6 months. (95% CI 3.6-9.0).
- Differences in AD/POLST based on receipt of PC persisted after multivariate modeling including age, PC, risk of mortality, gender and answer to the surprise question (OR 7.7; 95% CI 4.3-13.9).

Conclusion/Discussion

- In the absence of PC, few patients have documented goals of care conversations during admission.
- Receipt of palliative care is strongly associated with completion of advance care planning documents and having goals of care conversations.
- Without PC, the surprise question alone does not appear to trigger GOC conversations.

Limitations

- Single site and lack of racial and ethnic diversity in Maine may limit generalizeability to other populations.
- These results relied on chart abstraction of limited patient characteristics; there may be missing relevant clinical data that would explain observed differences.
- Results are observational and causality cannot be concluded.

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