

## Supplemental Digital Material

<b>Supplemental Digital Appendix 1:</b> Survey Questions Asked of Internal Medicine Residents at 7 Academic Medical Centers Regarding Their Patient Discharge Education and Practices . . . . .	<b>1-4</b>
<b>Supplemental Digital Appendix 2:</b> Table Presenting Distribution of Post-Graduate Year Response Rate Among 7 Internal Medicine Programs, 2019. . . . .	<b>5</b>
<b>Supplemental Digital Appendix 3:</b> Table Presenting Distribution of Residents' Educational Experiences for Each Post Graduate Year at 7 Internal Medicine Programs in 2019 . . . . .	<b>6</b>
<b>Supplemental Digital Appendix 4:</b> Table Presenting Distribution of Residents' Discharge-Related Educational Experiences Among 7 Internal Medicine Programs in 2019 . . . . .	<b>7</b>

## Supplemental Digital Appendix 1

### Survey Questions Asked of Internal Medicine Residents at 7 Academic Medical Centers Regarding Their Patient Discharge Education and Practices, 2019

1. If the patient has a caregiver, someone on my team reviews the discharge care plan with caregivers:  
[Team defined as medical student, intern, resident and/or attending]
  1. I am not sure about my team but I don't
  2. Rarely (0% to 20% of time)
  3. Not usually (21 to 40% of time)
  4. Sometimes (41 to 60% of time)
  5. Often (61% to 80% of time)
  6. Almost always (>80% of time)
2. If the primary care physician (PCP) does NOT have access to the EMR, someone on my team speaks to the PCP about the discharge plan or sends a discharge summary to the PCP or with the patient?  
[Team defined as medical student, intern, resident and/or attending]
  1. I am not sure about my team but I don't
  2. Rarely (0% to 20% of time)
  3. Not usually (21 to 40% of time)
  4. Sometimes (41 to 60% of time)
  5. Often (61% to 80% of time)
  6. Almost always (>80% of time)
3. If the team does not round together, how often do you discuss among team members dividing up the responsibilities of patient education:  
[Team defined as medical student, intern, resident and attending]

1. Rarely (0% to 20% of time)
  2. Not usually (21 to 40% of time)
  3. Sometimes (41 to 60% of time)
  4. Often (61% to 80% of time)
  5. Almost always (>80% of time)
4. Before discharge, how often do you review the purpose of any medication changes with patients?
1. Rarely (0% to 20% of time)
  2. Not usually (21 to 40% of time)
  3. Sometimes (41 to 60% of time)
  4. Often (61% to 80% of time)
  5. Almost always (>80% of time)
5. Before discharge, how often do you review self-management of their diseases for outpatient? (e.g. peak flow meter for asthma or how to use weight scale for heart failure)
1. Rarely (0% to 20% of time)
  2. Not usually (21 to 40% of time)
  3. Sometimes (41 to 60% of time)
  4. Often (61% to 80% of time)
  5. Almost always (>80% of time)
6. Before discharge, how often do you review symptom expectations with the patient?
1. Rarely (0% to 20% of time)
  2. Not usually (21 to 40% of time)
  3. Sometimes (41 to 60% of time)
  4. Often (61% to 80% of time)
  5. Almost always (>80% of time)
7. Before discharge, how often do you review red flags with the patient?
1. Rarely (0% to 20% of time)
  2. Not usually (21 to 40% of time)
  3. Sometimes (41 to 60% of time)
  4. Often (61% to 80% of time)
  5. Almost always (>80% of time)
8. Before discharge, how often do you review appointments verbally AND why they are important with the patient?
1. Rarely (0% to 20% of time)
  2. Not usually (21 to 40% of time)
  3. Sometimes (41 to 60% of time)
  4. Often (61% to 80% of time)
  5. Almost always (>80% of time)
9. Before discharge, how often do you ask patients to teach back their discharge care plan?
1. Rarely (0% to 20% of time)
  2. Not usually (21 to 40% of time)

3. Sometimes (41 to 60% of time)
  4. Often (61% to 80% of time)
  5. Almost always (>80% of time)
10. If you don't consistently do comprehensive discharge education with patients, it is because
- Y/N I believe a nurse or pharmacist is doing discharge education
  - Y/N I believe the attending is doing discharge education
  - Y/N It has not been role-modeled for me
  - Y/N I haven't had formal teaching/training on effective communication at discharge
  - Y/N There is not enough time
  - Y/N The information will be in the patient's discharge instructions
  - Y/N The patient is being transferred to SNF or rehab
  - Other \_\_\_\_\_
11. Have you ever been observed by a more senior member of the team when doing discharge education (i.e a resident or an attending for an intern or an attending for a resident)?
1. Yes
  2. No
12. Have you ever been observed AND given feedback by a more senior member of the team when doing discharge education (i.e a resident or an attending for an intern or an attending for a resident)?
1. Yes
  2. No
13. Have you ever been given specific feedback on how you lead multi-disciplinary rounds, particularly for patients being discharged?  
[Multi-disciplinary rounds defined as discussions with social worker, care manager, nursing or other disciplines]
1. Yes
  2. No
  3. I have never led interdisciplinary rounds
14. What areas in discharge multi-disciplinary communication need improvement?  
[Multi-disciplinary team includes nurse, clinicians, social worker, case manager or other disciplines]
15. Who is primarily responsible for patient education at discharge?
1. I am honestly not sure who does it
  2. Nurse

3. Pharmacist
4. Intern
5. Resident
6. Attending

16. Who is best suited to do patient education at discharge?

1. Nurse
2. Pharmacist
3. Intern
4. Resident
5. Attending

17. Have you received educational instructions on providing safe transitions of care at discharge in any of the following formats?

Y/N Lectures

Y/N Small group discussions/workshops

Y/N Post-discharge home visits

Y/N Post-discharge telephone calls

Y/N Post-discharge clinic visit

Y/N Explicit on-rounds teaching on key discharge education

Y/N Formalized discharge summary review

Y/N Online modules

Other: \_\_\_\_\_

18. What factors, if any, have contributed to change in your behavior at discharge? If so, what practice did you change?

## Supplemental Digital Appendix 2

**Table Presenting Distribution of Post-Graduate Year Response Rate Among 7 Internal Medicine Programs, 2019**

Postgraduate year	Program A: No. respondents / total residents for PGY (%) <sup>a</sup>	Program B: No. respondents / total residents for PGY (%) <sup>a</sup>	Program C: No. respondents / total residents for PGY (%) <sup>a</sup>	Program D: No. respondents / total residents for PGY (%) <sup>a</sup>	Program E: No. respondents / total residents for PGY (%) <sup>a</sup>	Program F: No. respondents / total residents for PGY (%) <sup>a</sup>	Program G: No. respondents / total residents for PGY (%) <sup>a</sup>
PGY-1	25/49 (51.0)	42/79 (53.2)	20/33 (60.6)	45/64 (70.3)	23/28 (82.1)	25/40 (62.5)	44/62 (71.0)
PGY-2	25/42 (59.5)	42/67 (62.7)	15/25 (60.0)	35/55 (63.6)	23/28 (82.1)	16/32 (50.0)	36/57 (63.2)
PGY-3	27/41 (65.9)	43/69 (62.3)	15/25 (60.0)	31/55 (56.4)	23/26 (88.5)	19/32 (59.4)	38/57 (66.7)

Abbreviations: PGY indicates postgraduate year

<sup>a</sup>The response rate was 63.4% (613/966) for the total sample, with 58.3% (77/132) for Program A, 59.1% (127/215) for Program B, 60.2% (50/83) for Program C, 63.8% (111/174) for Program D, 84.1% (69/82) for Program E, 57.7% (60/104) for Program F, 67.0% (118/176) for Program G.

## Supplemental Digital Appendix 3

**Table Presenting Distribution of Residents' Educational Experiences for Each PGY at 7 Internal Medicine Programs in 2019**

Educational experiences	Total no. of respondents (n = 613) <sup>a</sup>	No. (%) of 224 PGY1 respondents <sup>a</sup>	No. (%) of 193 PGY2 respondents <sup>a</sup>	No. (%) of 196 PGY3 respondents <sup>a</sup>	P value <sup>b</sup>
Lectures	340 (55.5)	118 (52.7)	110 (57.0)	112 (57.1)	0.17
Online modules	62 (10.1)	20 (8.9)	16 (8.3)	26 (13.3)	0.091
Small-group Workshops	301 (49.1)	99 (44.2)	107 (55.4)	95 (48.5)	0.046
Formal review of discharge summaries	181 (29.5)	54 (24.1)	55 (28.5)	71 (36.2)	0.004
Post-discharge telephone calls	117 (19.1)	34 (15.2)	40 (20.7)	43 (21.9)	0.15
Post-discharge clinic visits	314 (51.2)	80 (35.7)	118 (61.1)	116 (59.2)	< 0.001
Post-discharge home visits	64 (10.5)	7 (3.1)	23 (11.9)	34 (17.3)	< 0.001
Explicit teaching on rounds	276 (45.1)	94 (42.0)	87 (45.1)	95 (48.5)	0.095
Observation and feedback	116 (18.9)	41 (18.3)	38 (19.7)	37 (18.9)	0.678

Abbreviation: PGY, postgraduate year.

<sup>a</sup>The response rate was 63.4% (613/966) for the total sample, with 36.5% (224/613) PGY-1s, 32.0% (193/613) PGY-2s, 32.0% (196/613) PGY-3s

<sup>b</sup>Derived from chi-square tests

## Supplemental Digital Appendix 4

**Table Presenting Distribution of Residents' Discharge-Related Educational Experiences Among 7 Internal Medicine Programs in 2019**

Educational experiences	Total No. of Responses (n = 613 <sup>a</sup> )	Program A, no. (% of 77 <sup>a</sup> )	Program B, no. (% of 127 <sup>a</sup> )	Program C, no. (% of 50 <sup>a</sup> )	Program D, no. (% of 111 <sup>a</sup> )	Program E, no. (% of 69 <sup>a</sup> )	Program F, no. (% of 60 <sup>a</sup> )	Program G, no. (% of 118 <sup>a</sup> )	<i>P</i> value <sup>b</sup>
Lectures	340 (55.5)	39 (50.6)	83 (65.4)	14 (28.0)	80 (72.1)	28 (40.6)	22 (36.7)	71 (60.2)	< 0.001
Online modules	62 (10.1)	10 (13.0)	19 (15.0)	4 (8.0)	9 (8.1)	5 (7.2)	8 (13.3)	7 (5.9)	0.279
Small-group Workshops	301 (49.1)	30 (39.0)	73 (57.5)	13 (26.0)	72 (64.9)	23 (33.3)	27 (45.0)	61 (51.7)	< 0.001
Formal review of discharge summaries	181 (29.5)	17 (22.1)	53 (41.7)	7 (14.0)	35 (31.5)	10 (14.5)	15 (25.0)	44 (37.3)	< 0.001
Post-discharge telephone calls	117 (19.1)	12 (15.6)	27 (21.3)	3 (6.0)	25 (22.5)	11 (15.9)	9 (15.0)	27 (22.9)	0.009
Post-discharge clinic visits	314 (51.2)	39 (50.6)	76 (59.8)	10 (20.0)	66 (59.5)	31 (44.9)	34 (56.7)	58 (49.2)	< 0.001
Post-discharge home visits	64 (10.4)	8 (10.4)	18 (14.2)	0 (0.0)	25 (22.5)	3 (4.3)	3 (5.0)	7 (5.9)	< 0.001
Explicit teaching on- rounds	276 (45.0)	26 (33.8)	68 (53.5)	16 (32.0)	44 (39.6)	30 (43.5)	26 (43.3)	66 (55.9)	0.001
Observation and feedback	116 (18.9)	9 (11.7)	36 (28.3)	12 (24.0)	15 (13.5)	13 (18.8)	12 (20.0)	19 (16.1)	0.033

<sup>a</sup>The response rate was 63.4% (613/966) for the total sample, with 58.3% (77/132) for Program A, 59.1% (127/215) for Program B, 60.2% (50/83) for Program C, 63.8% (111/174) for Program D, 84.1% (69/82) for Program E, 57.7% (60/104) for Program F, 67.0% (118/176) for Program G.

<sup>b</sup>Derived from chi-square tests