

Year 3 Clinical Campus Model Pilot: A Comparative Outcome Study between the Pilot Single Hospital Campus Setting and the Traditional Multi-Hospital Settings

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DEFINITIONS

- Single Campus Site – All clerkships within the same hospital system unless a needed clinical service is not available
- Multi-Hospital Site – The student requests a hospital system for each of the seven required year 3 clerkships

PURPOSE

- To compare academic performance outcomes of year 3 medical students based on their hospital assignment(s).
- Pilot: Single hospital campus setting
- Traditional: Multi-hospital settings

METHODS

- 302 year 3 students
- 185 participated in the study
- Inclusion – started year 3 by September 2008
- Exclusion – not able to graduate on time
- Wayne State University HIC approval

METHODS

PILOT

- 2008-09 academic year
- 80 students requested
- 62 students assigned
- 48 enrolled in study

TRADITIONAL

- Many years
- 222 students requested
- 240 students assigned
- 137 enrolled in study

STATISTICAL METHODS

- Non-parametric Whitney-Mann U test used for the EOY 1, EOY 2, USMLE 1, USMLE 2CK, and the NBME subject exam score comparisons.
- Chi-Square test using cross tabulation was used for the clerkship grades and class rank comparisons.
- SPSS PASW 18 statistical software was used to make calculations.

RESULTS

GENDER and AGE

	Single Hospital	Multi- Hospital	Total
Number	48	137	185
Women (%)	27 (56.2)	70 (51.1)	97 (52.4)
Men (%)	21 (43.8)	67 (48.9)	88 (47.6)
Mean age	25.73	25.98	25.91

SCORES PRIOR TO YEAR 3

	Single Hospital Group	Multi-Hospital Group	P
EOY1			
Mean	530.08	522.42	.496
Median	534.06	521.58	
SD	61.21	70.03	
EOY2			
Mean	528.38	520.96	.372
Median	536.47	521.56	
SD	71.40	71.71	
USMLE 1			
Mean	227.5	223.0	.147
Median	231.5	224.0	
SD	17.45	20.62	

GRADES, SCORES, & RANK

- **There was a statistically significant difference in the family medicine and psychiatry clerkship grades. Grades were lower in the single hospital group.**
- There were no differences in NBME subject exam scores.
- There were no differences in USMLE step 2CK scores.
- There were no differences in class rank by quintile.

CLERKSHIP GRADES

n (%)

	Failure	Satisfactory	Satisfactory +	Honors	p
Family Medicine					
Single Hospital	0 (0.0)	22 (45.8)	22 (45.8)	4 (8.3)	.007
Multi-Hospital	0 (0.0)	31 (22.6)	81 (59.1)	25 (18.2)	
Psychiatry					
Single Hospital	0 (0.0)	28 (58.3)	12 (25.0)	8 (16.7)	.026
Multi-Hospital	6 (4.4)	48 (35.0)	54 (39.4)	29 (21.2)	
Internal Medicine					
Single Hospital	0 (0.0)	19 (39.6)	19 (39.6)	10 (20.8)	.800
Multi-Hospital	2 (1.5)	48 (35.0)	55 (40.1)	32 (23.4)	
Neurology					
Single Hospital	1 (2.1)	11 (22.9)	30 (62.5)	6 (12.5)	.514
Multi-Hospital	1 (0.7)	27 (19.7)	80 (58.4)	29 (21.2)	

CLERKSHIP GRADES

n (%)

	Failure	Satisfactory	Satisfactory +	Honors	p
OB-GYN					
Single Hospital	1 (2.1)	7 (14.6)	21 (43.8)	19 (39.6)	.182
Multi-Hospital	1 (0.7)	40 (29.2)	56 (40.9)	40 (29.2)	
Pediatrics					
Single Hospital	0 (0.0)	22 (45.8)	16 (33.3)	10 (20.8)	.329
Multi-Hospital	0 (0.0)	70 (51.1)	31 (22.6)	36 (26.3)	
Surgery					
Single Hospital	4 (8.3)	28 (58.3)	3 (6.3)	13 (27.1)	.807
Multi-Hospital	18 (13.1)	77 (56.2)	10 (7.3)	32 (23.4)	

NBME SUBJECT EXAMS

	Single Hospital	Multi-Hospital	p
Family Medicine			
Mean	72.0	74.1	.253
Median	72.5	73.0	
SD	5.69	8.44	
Psychiatry			
Mean	76.1	78.1	.070
Median	76.0	78.0	
SD	6.99	7.84	
Internal Medicine			
Mean	75.5	76.0	.894
Median	76.0	75.0	
SD	6.82	7.70	
Neurology			
Mean	71.0	71.4	.755
Median	71.0	71.0	
SD	5.67	6.84	

NBME SUBJECT EXAMS

	Single Hospital	Multi-Hospital	p
OB-GYN			
Mean	74.1	74.2	.786
Median	76.0	73.0	
SD	6.68	8.23	
Pediatrics			
Mean	73.2	75.3	.190
Median	73.0	75.0	
SD	5.99	8.65	
Surgery			
Mean	71.3	70.8	.737
Median	70.0	71.0	
SD	7.20	7.91	

USMLE 2CK SCORES

	Single Hospital	Multi-Hospital	p
Mean	233.43	234.11	.651
Median	234	237	
SD	18.86	22.19	

CLASS RANK

n (%)

	First	Second	Third	Fourth	Fifth	p
Single Hospital	4 (8.3)	4 (8.3)	15 (31.3)	14 (29.2)	11 (22.9)	.216
Multi-Hospital	16 (11.7)	27 (19.7)	27 (19.7)	32 (23.4)	35 (25.5)	

DISCUSSION

- The need for multiple clinical campuses will increase as the population of medical students increases.
- **Objective** performance outcomes are a function of the student. Success predicts success.
- **Subjective** evaluations may vary.
 - Site culture
 - Inter-rater reliability within and between sites.
 - Student's fit with the site

LIMITATIONS

- Relatively small number of students in study
- Not randomized
 - Selection bias
- Retrospective observational study
- Lack of student satisfaction survey

PLANS FOR FUTURE STUDY

- The year 3 students are now all assigned to a single clinical campus.
- Compare student outcomes from each of the clinical campuses to each other.
- Include a student satisfaction survey

QUESTIONS ???

COMMENTS