Outcomes of a Health Systems Advocacy, Leadership & Management (HALM) Curriculum in a Family Medicine Residency Program

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Introduction

- Healthcare Administration, Leadership, and Management (HALM) offers a broad area of expertise that is key to healthcare delivery and health services research.
- HALM fellowship programs are currently active and accredited, with approval as a subspecialty in 2023. The ACGME also recently established a review committee specific to HALM.
- Some core health systems competencies are already common program requirements. However, while most residency programs offer a curriculum in health systems to fulfill these requirements, there is a dearth of data on the outcomes of these curricula.
- We implemented a HALM curriculum in a family medicine residency program featuring competencies in patient safety, healthcare quality, care management, and systems of care.
- **The aim of this study is to perform a retrospective review of Kirkpatrick Level 2, 3, and 4 outcomes on the 5 year implementation of the HALM curriculum.**
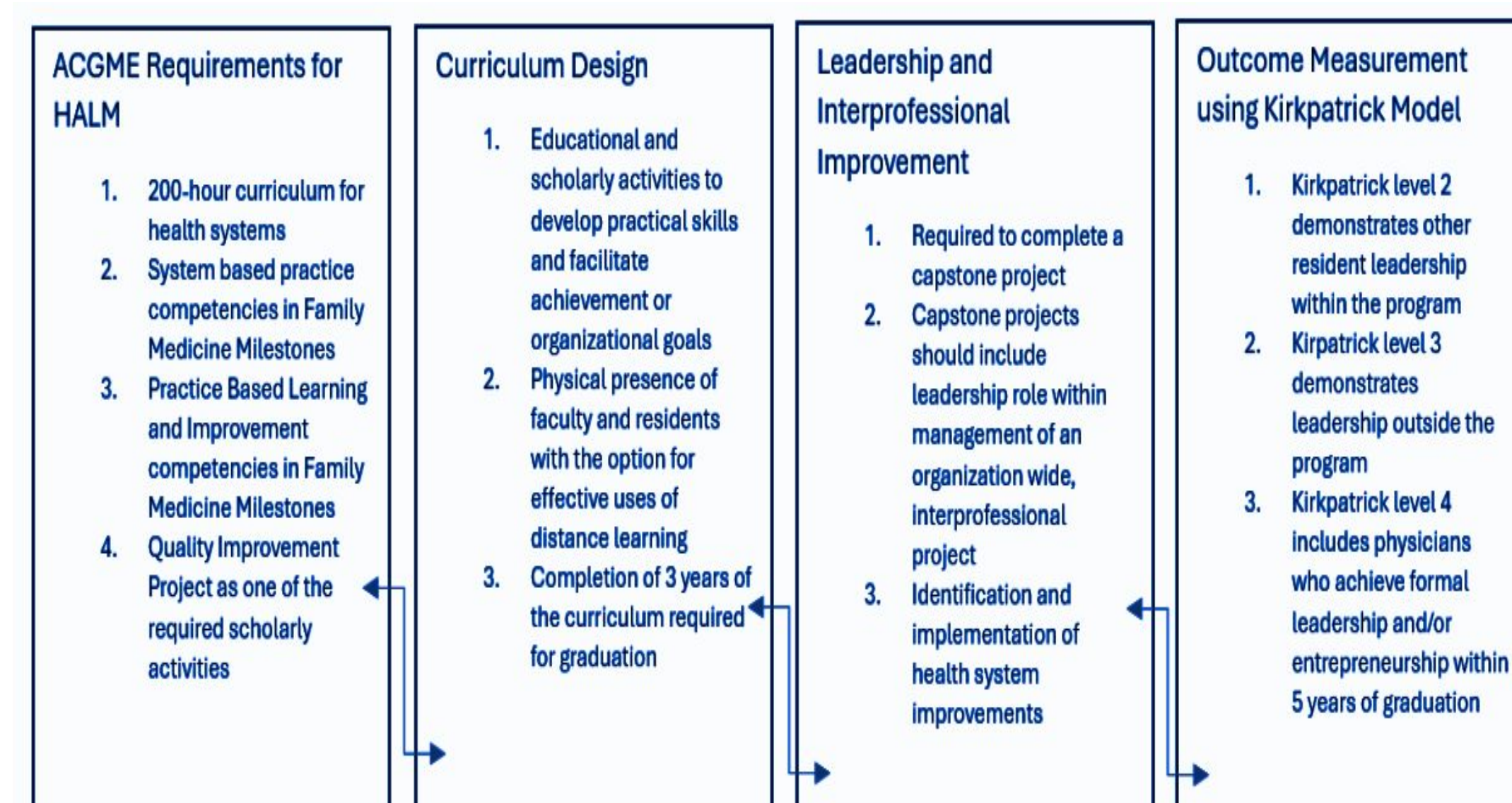
Acknowledgments

Methods

- Retrospective study evaluating the outcomes of a longitudinal HALM curriculum for family medicine residents.
- Two cohorts were compared:
  - Pre-intervention group: Residents graduated 2016-2020
  - Post-intervention group: Residents graduated 2021-2024
- **We conducted a quasi-experimental study with pre- and post-designs to assess the impact of HALM on Kirkpatrick level 2, 3, and 4 outcomes measured by meaningful resident engagement as well as involvement in a large complex integrated healthcare delivery system at different levels. Data was collected on resident demographics and achievement of these outcomes before and after curriculum implementation. A Statistical Analysis was conducted by using SPSS 29, and chi-square and Fisher's exact tests for group comparisons. Univariate regression analysis was utilized to detect significant differences between groups.**

Kirkpatrick Level

Level 2: Assuming leadership role within the program

Level 3: Assuming leadership role outside of the program while in training

Level 4: Assuming physician leadership or significant entrepreneurship role within five years after graduation

		Before implementation	After implementation of roadmap	P value by Chi-square or Fisher's Exact
Gender	Male	14/26(42.9 %)	11/25 (44%)	0.48
	Female	12/26 (57.1%)	14/25 (56%)	
Race	White	14/26 (54%)	4/25 (16%)	0.071
	Asian	8/26 (30.7%)	12/25 (50%)	
	Black	3/26 (11.5%)	5/25 (20%)	
	LatinX	1/26 (3.8%)	2/25 (7%)	
Medical School	Osteopathic COCA Accredited	26/26 (100%)	10/25 (40%)	<0.0001
	LCME Accredited	0/26 (0%)	3/25 (12)%	
	International	0/26 (0%)	12/25(48%)	

Table-1: Demographics of the participants pre and post implementation of the curriculum

Results

- Pre-intervention group included 26 family medicine residents who graduated from 2016 - 2020 while the post-intervention group had 25 family residents who graduated from 2021 - 2024.
- The odds of significant leadership roles and competencies were higher in the post-implementation group with the exception of the Chief Resident designation which is a fixed number allowed by the institution. It is interesting to note that 32% of the graduates from the post-implementation group obtained a significant physician leadership role within 5 years of graduation.

Variables	Overall (n=51)	Pre Intervention (n=26)	Post intervention (n=25)	Unadjusted OR (95% CI)	p-value
	N (%)	N (%)	N (%)		
Chief Resident	13 (25.5)	5 (19.2)	8 (32.0)	1.97 (0.54, 7.16)	0.30
Other Resident Leadership within Program	31 (60.8)	6 (23.1)	25 (100.0)	79.2 (8.78, 714.1)	<0.001
Leadership outside the program	24 (47.1)	5 (19.2)	19 (76.0)	13.3 (3.48, 50.8)	<0.001
Formal Leadership Role/Entrepreneurship within 5 years of Graduation	10 (19.6)	2 (7.69)	8 (32.0)	5.64 (1.06, 29.9)	0.042

Table-2: Results of Univariate Logistic Regression with no adjustments for curricular outcomes pre and post implementation of the HALM curriculum (intervention)

Conclusions

- This HALM curriculum effectively achieved its objectives of enhancing resident competency in Health Systems science as it relates to healthcare advocacy, leadership, and management.
- This HALM curriculum could be used as an example for providing residents and fellows with longitudinal experience to equip them with necessary skill set for integrated health systems.
- The next step is expanding the HALM curriculum to other residency programs, monitoring the outcomes, and validating the effectiveness of the curriculum.

References/Literature cited