Heath JK, Edgar L, Guralnick S. Assessment of learning, for learning: operationalizing Milestone data for program-level improvement. *J Grad Med Educ*. 2021;13(suppl 2):120-123.

#### **Supplementary Data**

FIGURE
Sample Table of Predictive Probability Values (PPV) for a Learner

Subcompetency	Threshold	Yr1, Mid-Year	Yr1, Year-End	Yr2, Mid-Year	Yr2, Year-End	Yr3, Mid-Year	Yr3, Year-End	Yr4, Mid-Year
PC01								
	≤ Level 5.0							
	≤ Level 4.5							
	≤ Level 4.0							4.5
	≤ Level 3.5							9.2
	≤ Level 3.0					4.8	7.5	42.8
	≤ Level 2.5				4.6	9.0	27.5	63.6
	≤ Level 2.0			4.8	5.9	28.1	46.0	
	≤ Level 1.5			5.7	24.8			
	≤ Level 1.0	4.3	4.3	21.4	49.4			
PC02								
P C 0 2	≤ Level 5.0							
	≤ Level 4.5							
	≤ Level 4.0							
	≤ Level 3.5				5.2			12.4
	≤ Level 3.0				5.3	6.0	9.8	46.7
	≤ Level 2.5				5.9	11.4	34.6	65.6
	≤ Level 2.0			5.8	7.8	36.3	50.8	
	≤ Level 1.5			7.8	29.3	69.3		
	≤ Level 1.0	5.5	5.7	21.4	74.2			

Predictive probability values (PPVs) are estimates that Milestone ratings will fall below Level 4 (the recommended graduation target) by time of graduation, based on national longitudinal milestone ratings. The above table highlights PPVs listed in columns that correspond to each six-month milestone reporting period. The values within the table (PPVs) indicate the percent probability that a learner rated at a certain level with not reach Level 4 in that subcompetency by graduation. For example, in the PC01 subcompetency above, if a learner is rated at a Level of 2.0 in the middle of the 3rd post-graduate year, the value of 28.0 indicates a 28% probability that the resident will not achieve Level 4 in this subcompetency by the time of graduation.

#### **Additional Resources**

- 1. Accreditation Council for Graduate Medical Education. Milestones National Report 2019. <a href="https://www.acgme.org/Portals/0/PDFs/Milestones/2019MilestonesNationalReportFinal.pd">https://www.acgme.org/Portals/0/PDFs/Milestones/2019MilestonesNationalReportFinal.pd</a> f?ver=2019-09-30-110837-587. Accessed April 5, 2021.
- 2. Accreditation Council for Graduate Medical Education. Clinical Competency Committees: A Guidebook for Programs.

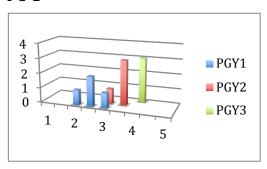
https://www.acgme.org/Portals/0/ACGMEClinicalCompetencyCommitteeGuidebook.pdf. Accessed April 5, 2021.

### Program Milestones Distribution by Subcompetency and PGY Year

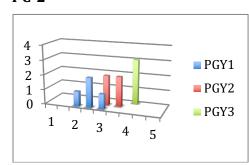
#### **Cardiovascular Medicine End of Year Milestones**

Vertical Axis – Number of residents assigned the milestone level Horizontal Axis - Milestone level assigned

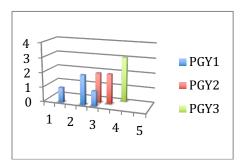
PC-1



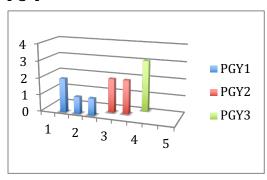
PC-2



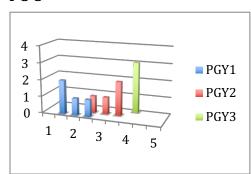
PC-3



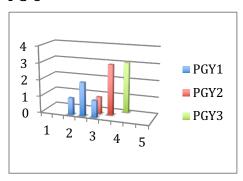
**PC-4** 



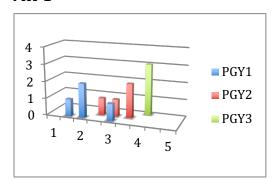
**PC-5** 



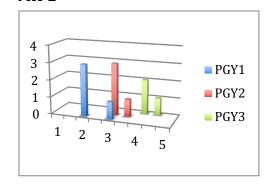
**PC-6** 



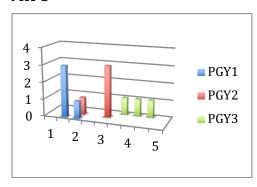
MK-1



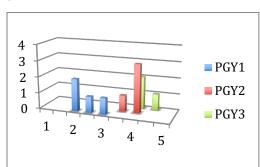
MK-2



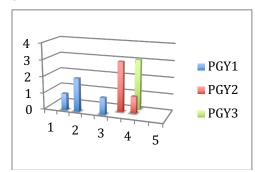
**MK-3** 



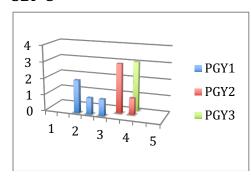
SBP-1



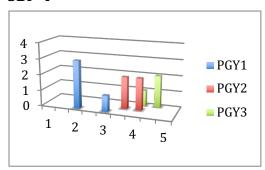
SBP-2



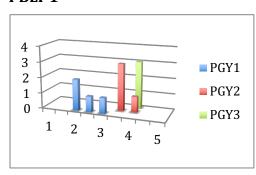
SBP-3



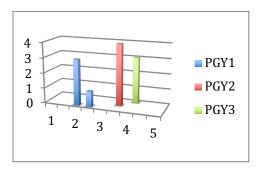
SBP-4



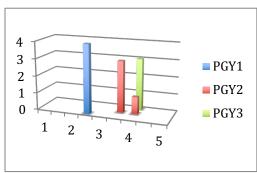
PBLI-1



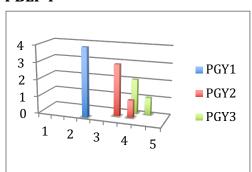
PBLI-2



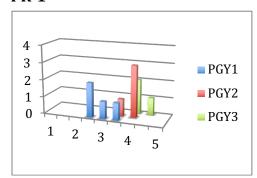
PBLI-3



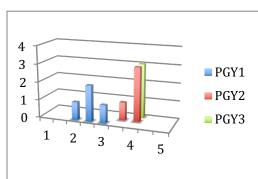
PBLI-4



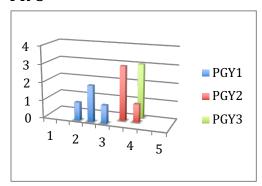
PR-1



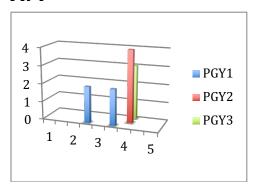
PR-2



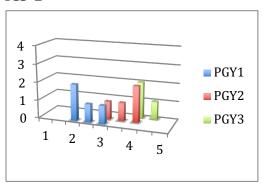
PR-3



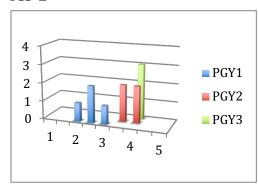
PR-4



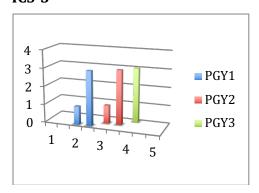
ICS-1



ICS-2



ICS-3



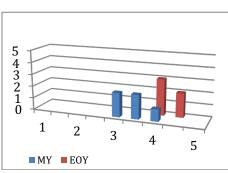
## One-Year Program Milestones Mid- and End-of-Year Distribution by Subcompetency

### **Geriatrics: Mid-Year and End-of-Year Milestones**

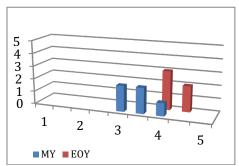
Vertical Axis - Number of residents assigned the milestone level Horizontal Axis - Milestone level assigned

Abbreviations: MY, mid-year; EOY, end-of year

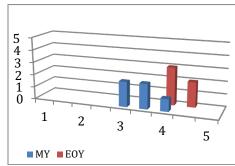
**PC-1** 



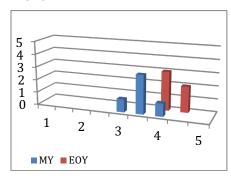
**PC-2** 



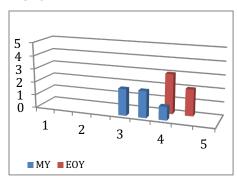
**PC-3** 



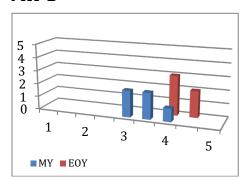
PC-5



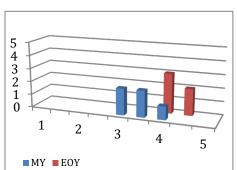
**PC-6** 



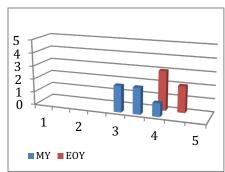
**MK-1** 



MK-2

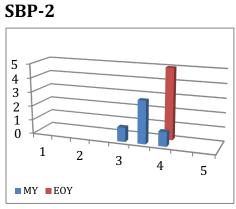


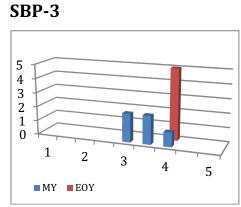
**MK-3** 

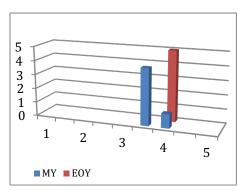


SBP-1

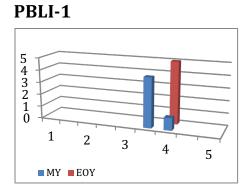
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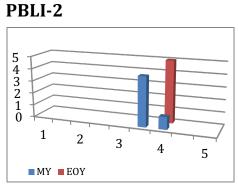


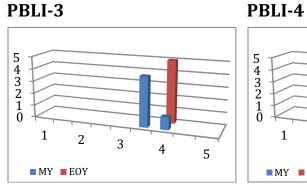


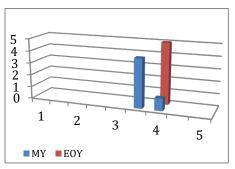


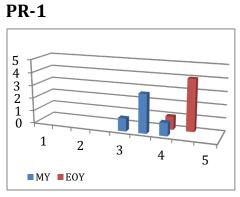
SBP-4

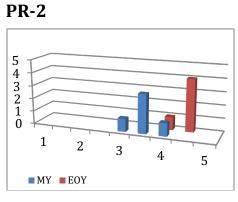


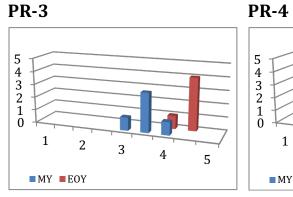


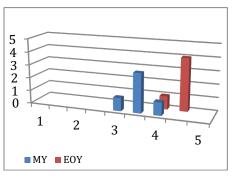




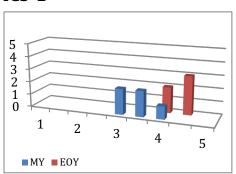




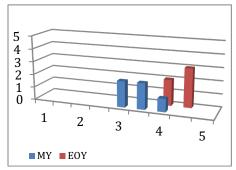




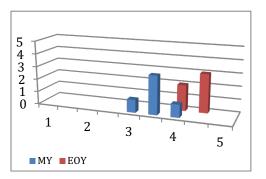
ICS-1



ICS-2



ICS-3



Heath JK, Edgar L, Guralnick S. Assessment of learning, for learning: operationalizing Milestone data for program-level improvement. *J Grad Med Educ*. 2021;13(suppl 2):120-123.

# **Creating a Program Milestones Trend Chart**

Subcompetency	Resident Level	Milestone Level Assigned	from	the	ACGN	ΛE d	ata file	(or	your o	wn c	data)		bcompetency
PC1	1	1.5	2. Create a table with the number of residents at each PGY level assigned each milestone level										
PC1	1	2	3. Create a 3-D Column Chart by highlighting the data in your chart										
PC1	1	2.5	4. Crea					,		J			,
PC1	2	2											
PC1	2	3	PC1	1	1.5	2	2.5	3	3.5	4	4.5	5	
PC1	2	3.5	PGY1		1	1	1						
PC1	3	4	PGY2			1		1	1				
PC1	3	4	PGY3							2	1		
PC1	3	4.5											
													i
ICS2	1	2	ICS2	1	1.5	2	2.5	3	3.5	4	4.5	5	İ
ICS2	1	2	PGY1			2	1						İ
ICS2	1	2.5	PGY2				1	1	1				İ
ICS2	2	2.5	PGY3					1		1	1		ı
ICS2	2	3											
ICS2	2	3.5											
ICS2	3	3											
ICS2	3	4											
ICS2	3	4											
								ı	ı	ı		ı	İ
SBP1	1	2	SBP1	1	1.5	2	2.5	3	3.5	4	4.5	5	l
SBP1	1	2.5	PGY1			1	2						1
SBP1	1	2.5	PGY2				1	2					1
SBP1	2	2.5	PGY3					3					
SBP1	2	3											
SBP1	2	3											
SBP1	3	3											
SBP1	3	3											
SBP1	3	3											

