

## Update on the National Surgical Resident Cohort Study

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ARCS Meeting  
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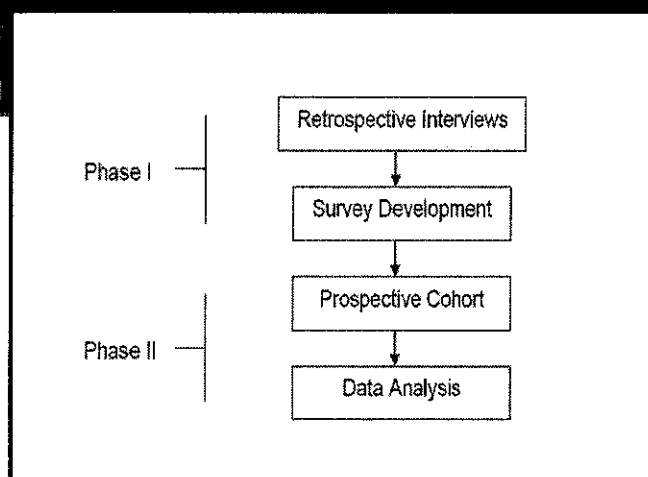
## Aims of Study

- Determine national incidence of attrition
- Identify factors associated with intention to leave training and actual attrition
- Provide data to aid in the development of strategies to address attrition

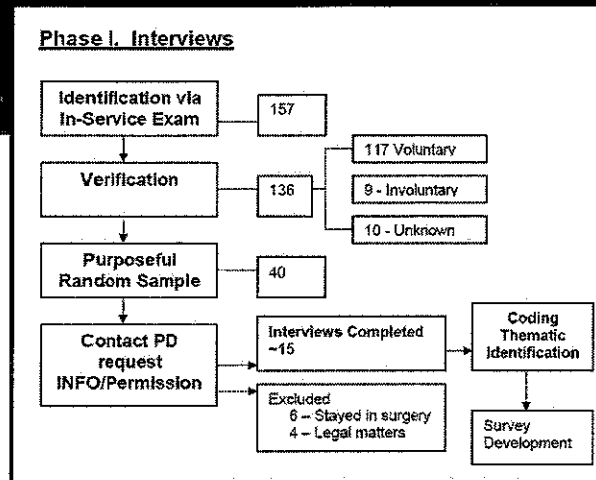
## Multifactorial Considerations

Systemic/Professional Factors	Institutional Factors	Resident Factors
<ul style="list-style-type: none"><li>▪ Reimbursement</li><li>▪ Renumeration</li><li>▪ Litigation</li><li>▪ Workplace Safety</li><li>▪ Changing Field</li><li>▪ Specialization</li><li>▪ Lifestyle</li><li>▪ Business model</li></ul>	<ul style="list-style-type: none"><li>▪ Work Environment</li><li>▪ Faculty/Mentorship</li><li>▪ Salary/Compensation</li><li>▪ Benefits</li><li>▪ Caseload</li><li>▪ Co-Residents</li><li>▪ Education/Teaching</li><li>▪ Geographic Location</li><li>▪ Program Size</li></ul>	<ul style="list-style-type: none"><li>▪ Age</li><li>▪ Gender</li><li>▪ Economics</li><li>▪ Family</li><li>▪ Skill Level</li><li>▪ Job Satisfaction</li><li>▪ Personality</li><li>▪ USMG vs. FMG</li><li>▪ Stress</li></ul>

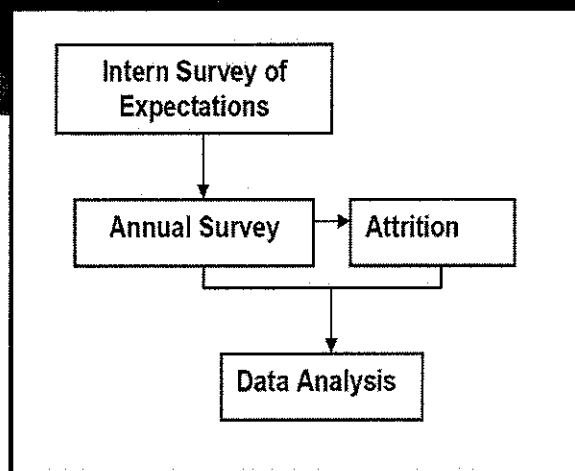
## Methods: A Qualitative and Quantitative Approach



## Phase I: Retrospective Interviews

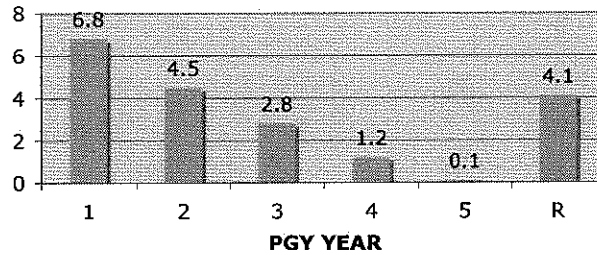


## Phase II: Prospective Cohort Study (tracking residents annually)



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**CATEGORICAL RESIDENT ATTRITION 2007-8**



**CUMULATIVE RISK ~ 19%**

## 2008 Attrition Survey Sample

<b>Demographics</b> <i>Surgical Resident Cohort 2008</i>	
	N (%)
<b>Total</b>	4586 (77)
<b>Age (μ, yrs)</b>	30.6 (3)
<b>Gender</b>	3114 (68)
Male	
<b>PGY-Year</b>	
1	871 (19)
2	962 (21)
3	1027 (22)
4	812 (18)
5+	750 (17)
Lab Residents	134 (3)
<b>Marital Status</b>	
Married/Partner	2248 (49)
Single-Relationship	1032 (23)
<b>Race</b>	
White	2880 (63)
Black	231 (5)
Asian	814 (18)
Other	420 (9)

## Intention to leave surgery

GENDER	Q11 I have considered leaving my program in the last year														All
	MISSING		S. AGREE		AGREE		NEUTRAL		DISAGREE		S. DISAGREEE		H		
	H	%	H	%	H	%	H	%	H	%	H	%			
Missing			1	10				1	10	7	70	1	10	10	
Female	26	1.9	64	4.6	200	14.4	173	12.5	400	28.8	526	37.9	1389		
Male	55	1.8	74	2.5	316	10.6	265	8.9	822	27.5	1456	48.7	2988		
All	81	1.8	139	3.2	516	11.8	439	10	1229	28	1983	45.2	4387		

## Program culture

GENDER	Q3 Program has support structures for me to turn to when struggling														All	
	INCORRECT		MISSING		S. AGREE		AGREE		NEUTRAL		DISAGREE		S. DISAGREEE			H
	H	%	H	%	H	%	H	%	H	%	H	%	H	%		
Missing					1	10	4	40	4	40	1	10			10	
Female	5	0.4	19	1.4	220	15.8	664	47.8	333	24	123	8.9	25	1.8	1389	
Male	5	0.2	50	1.7	698	22	1510	50.5	537	18	203	6.8	25	0.8	2988	
All	10	0.2	69	1.6	879	20	2178	49.6	674	19.9	327	7.5	50	1.1	4387	

GENDER	Q15 Uncomfortable w some ethical decisions made by some attendings														All
	MISSING		S. AGREE		AGREE		NEUTRAL		DISAGREE		S. DISAGREEE		H		
	H	%	H	%	H	%	H	%	H	%	H	%			
Missing					1	10	2	20	5	50	2	20	10		
Female	21	1.5	31	2.2	292	21	316	22.8	599	43.1	130	9.4	1389		
Male	60	2	66	2.2	489	16.4	643	21.5	1373	46	367	11.9	2988		
All	81	1.8	97	2.2	782	17.8	961	21.9	1972	45.1	488	11.1	4387		

# Money worries

GENDER	Q45 Expectation of good compensation influenced my decision to be a surgeon												All	
	MISSING		S. AGREE		AGREE		NEUTRAL		DISAGREE		S. DISAGREE			
	N	%	N	%	N	%	N	%	N	%	N	%		N
Missing					5	50	3	30	2	20				10
Female	47	3.4	25	1.8	265	18.1	378	27.2	528	38.1	145	10.4	1389	
Male	123	4.1	151	5.1	927	31	611	27.1	783	26.2	193	6.5	2988	
All	170	3.9	176	3.8	1192	27.3	1182	27.2	1314	30	339	7.7	4387	

GENDER	Q46 Each year my expectations for the money I will make seem to go down												All
	MISSING		S. AGREE		AGREE		NEUTRAL		DISAGREE		S. DISAGREE		
	N	%	N	%	N	%	N	%	N	%	N	%	
Missing			2	20	5	50	3	30					10
Female	46	3.3	129	9.3	517	37.2	451	32.5	236	17	10	0.7	1389
Male	123	4.1	473	15.8	1069	35.5	890	29.8	416	13.9	26	0.9	2988
All	169	3.9	604	13.8	1582	36.1	1344	30.6	652	14.9	36	0.8	4387

GENDER	Q47 I worry about making enough money as a surgeon												All
	MISSING		S. AGREE		AGREE		NEUTRAL		DISAGREE		S. DISAGREE		
	N	%	N	%	N	%	N	%	N	%	N	%	
Missing			2	20	1	10	5	50	2	20			10
Female	47	3.4	94	6.8	338	24.3	344	24.8	487	35.1	76	5.7	1389
Male	120	4.3	326	11	797	26.7	718	24	867	26	152	5.1	2988
All	176	4	424	9.7	1136	25.9	1065	24.3	1354	30.9	221	5.3	4387

# Performance worries

GENDER	Q18 Worry not confident enough to perform procedure when done training												All
	MISSING		S. AGREE		AGREE		NEUTRAL		DISAGREE		S. DISAGREE		
	N	%	N	%	N	%	N	%	N	%	N	%	
Missing					3	30	1	10	5	50	1	10	10
Female	21	1.5	73	5.3	450	32.4	225	16.3	472	34	147	10.6	1389
Male	61	2	104	3.5	557	18.6	538	18	1196	40	532	17.8	2988
All	82	1.9	177	4	1010	23	765	17.4	1573	38.1	680	15.5	4387

GENDER	Q23 Attendings will think worse of me if I ask for help w managing a pt												All		
	INCORRECT	MISSING		S. AGREE		AGREE		NEUTRAL		DISAGREE		S. DISAGREE			
	N	%	N	%	N	%	N	%	N	%	N	%		N	
Missing							1	10	3	30	6	60	10		
Female	1	0.1	23	1.7	19	1.4	191	13.8	246	17.7	741	53.3	158	12.1	1389
Male			75	2.5	56	1.9	373	12.5	534	17.8	1562	52.3	386	13	2988
All	1	0	98	2.2	75	1.7	566	12.8	783	17.8	2303	52.6	566	12.7	4387

## Summary

- This study is a comprehensive prospective investigation of attrition from surgery residency
- Cumulative risk of categorical attrition is approximately 1 in 5 over course of residency
- Surveys show us that a substantial number of residents have concerns about program culture, finances, and performance.
- Next step is to determine which of these factors is correlated with actual attrition

## Specialty training

GENDER	Q39 Modern surgeon must become specialty trained to be successful												All
	MISSING		S. AGREE		AGREE		NEUTRAL		DISAGREE		S. DISAGREE		
	N	%	N	%	N	%	N	%	N	%	N	%	
Missing			1	10	6	60	2	20	1	10			10
Female	47	3.4	159	11.4	548	39.5	291	21	316	22.7	29	2.1	1388
Male	116	3.9	430	14.4	1125	39.7	528	17.5	646	21.6	87	2.9	2988
All	163	3.7	590	13.4	1759	39.6	817	18.6	962	21.9	116	2.6	4357