



# Do student pharmacists possess the strengths necessary for success in emergency cardiovascular response?

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## BACKGROUND

- Pharmacist participation in emergency response teams results in 12,880 fewer deaths annually
- This signifies the importance of incorporating the pharmacists' role in an emergency response into the PharmD curriculum
- Advanced cardiovascular life support (ACLS) is a fast-paced, high stress, demanding scenario
- Previous research in other health professions has identified personality factors associated with success in high stress disciplines
- Purpose:** Identify strengths important for response to cardiovascular emergencies
- Hypothesis:** Student pharmacists are frequently equipped with strengths deemed necessary for success in these scenarios

## OUTCOMES

### Primary Outcome

- Top CliftonStrengths® themes considered important for the pharmacist role in ACLS

### Secondary Outcomes

- Top CliftonStrengths® themes considered important for emergency response teams and for team leaders
- Top and bottom CliftonStrengths® themes of PharmD students

## STUDY DESIGN

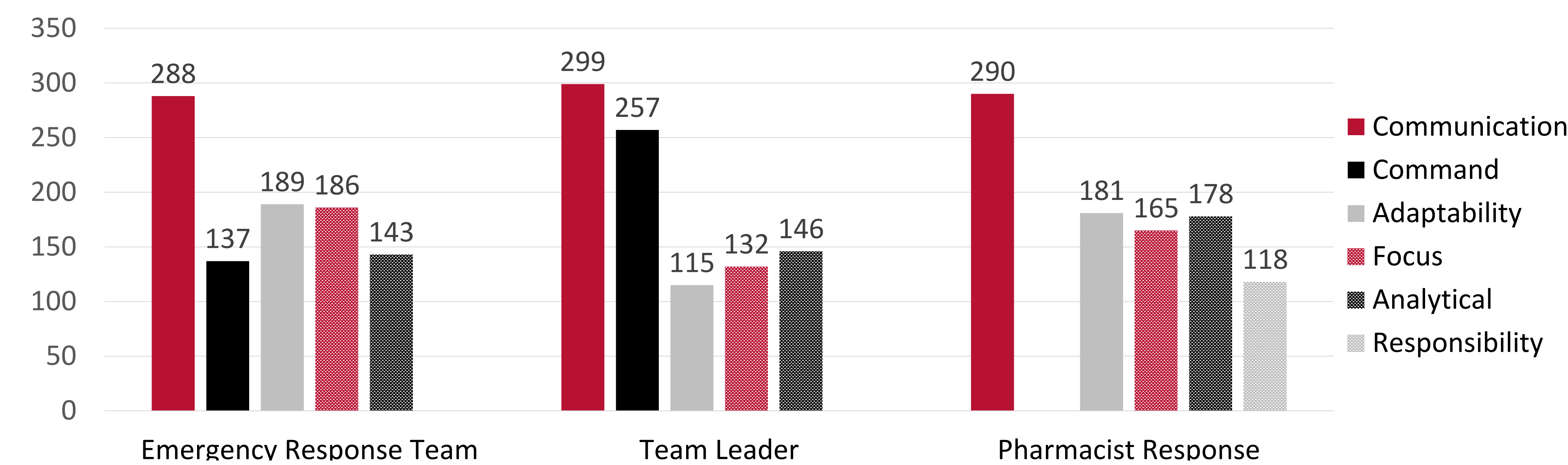
- PART I:** cross-sectional electronic survey of pharmacists with potential role in ACLS
  - Cohort Surveyed:** ACCP Adult Medicine, Cardiology, Critical Care, Emergency Medicine, and Pediatrics Practice and Research Networks
  - Survey:** 19 questions assessing demographics, experience with ACLS, and perceptions of CliftonStrengths® themes important for ACLS
  - Compensation:** \$5 electronic gift card offered
- PART II:** retrospective cohort study
  - Cohort:** Class of 2019 PharmD students
- Descriptive statistics were used for all outcomes

## RESULTS

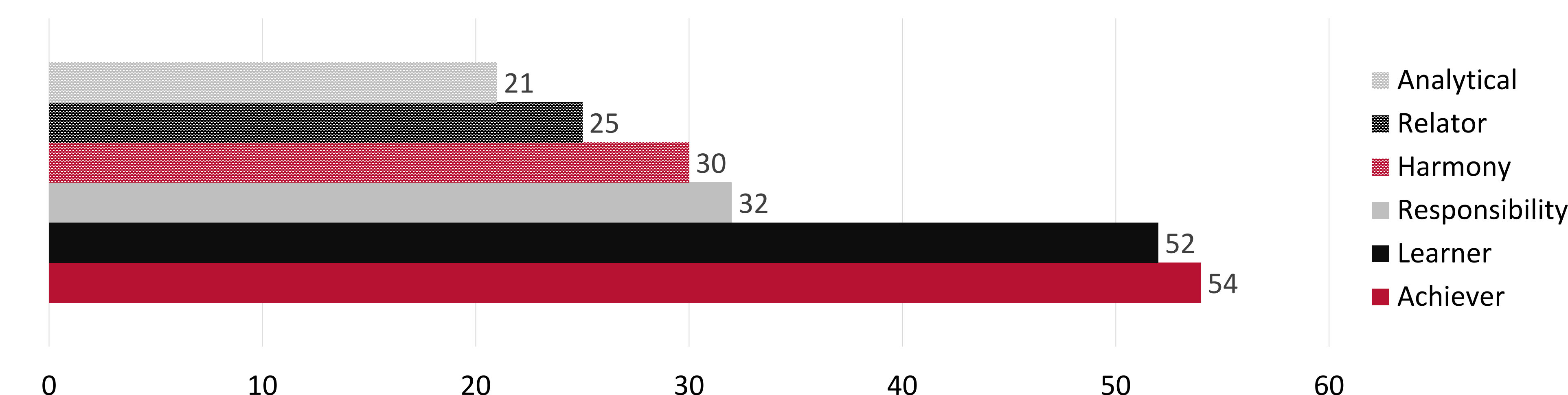
**Table 1. Characteristics of Survey Respondents and Practice Sites**

Variable	Number (%) n=359	Variable	Number (%) n=359
<b>Institution Type</b>		<b>Practice Region</b>	
Community Acute-Care Hospital	179 (49.9)	Midwest	128 (35.7)
University-Affiliated Acute-Care Hospital	147 (40.9)	South	125 (34.8)
Academia/College of Pharmacy	20 (5.6)	Northeast	55 (15.3)
Other	13 (3.6)	West	49 (13.6)
<b>Teaching Hospital</b>		<b>Pharmacy Experience</b>	
Hospital Size	266 (74.1)	0 – 5 years	178 (49.6)
<100 beds	8 (2.2)	6 – 10 years	94 (26.5)
100 – 249 beds	37 (10.3)	11 – 15 years	46 (12.8)
250 – 499 beds	121 (33.7)	>15 years	40 (11.1)
500 – 1000 beds	156 (43.5)	<b>Additional Training Completed</b>	
>1000 beds	32 (8.9)	None	22 (6.1)
<b>Patient Population</b>		<b>PGY1 Residency</b>	
Adult	330 (91.0)	PGY2 Residency	268 (74.1)
Pediatrics	29 (8.1)	Board Certification	249 (69.4)
<b>Primary Practice Area</b>		<b>Female Gender</b>	
Intensive Care Unit	144 (40.1)	Certified in ACLS and/or PALS	344 (95.8)
Emergency Department	120 (33.4)	Respond to Cardiovascular Emergencies	312 (86.9)
General Medicine	58 (16.2)	≤ 5 per month	128 (35.7)
Cardiology	21 (5.8)	6 – 10 per month	129 (35.9)
Other Practice Area	16 (4.5)	> 10 per month	55 (15.4)

**Figure 1. Top CliftonStrengths® Themes for Emergency Response (n=359)**

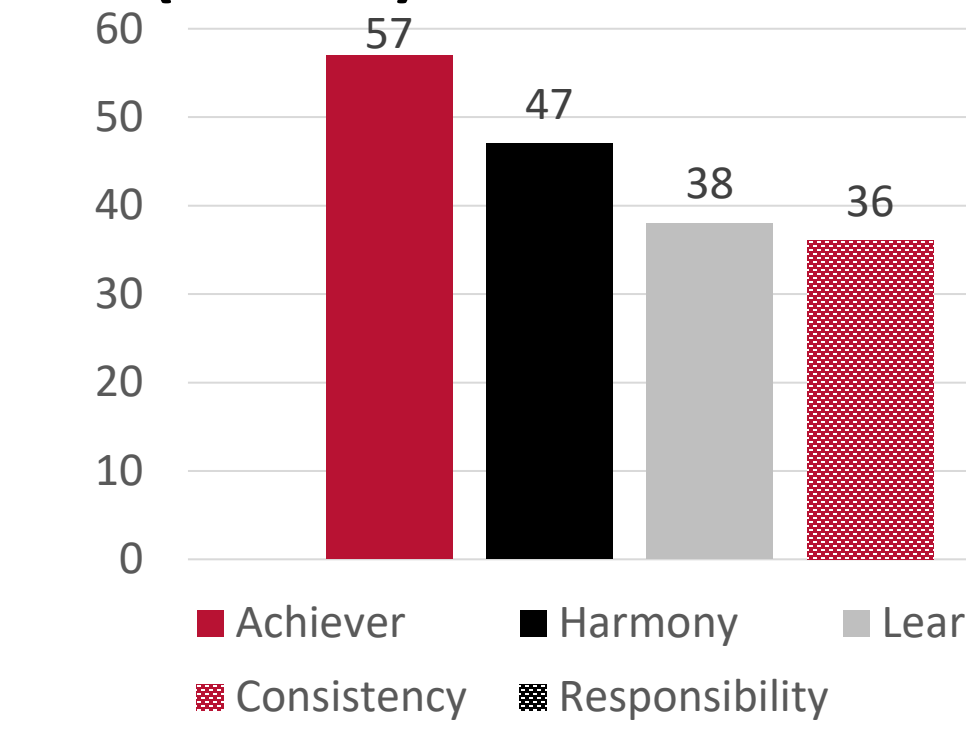


**Figure 2. Top CliftonStrengths® Themes Possessed by Survey Respondents (n=104)**

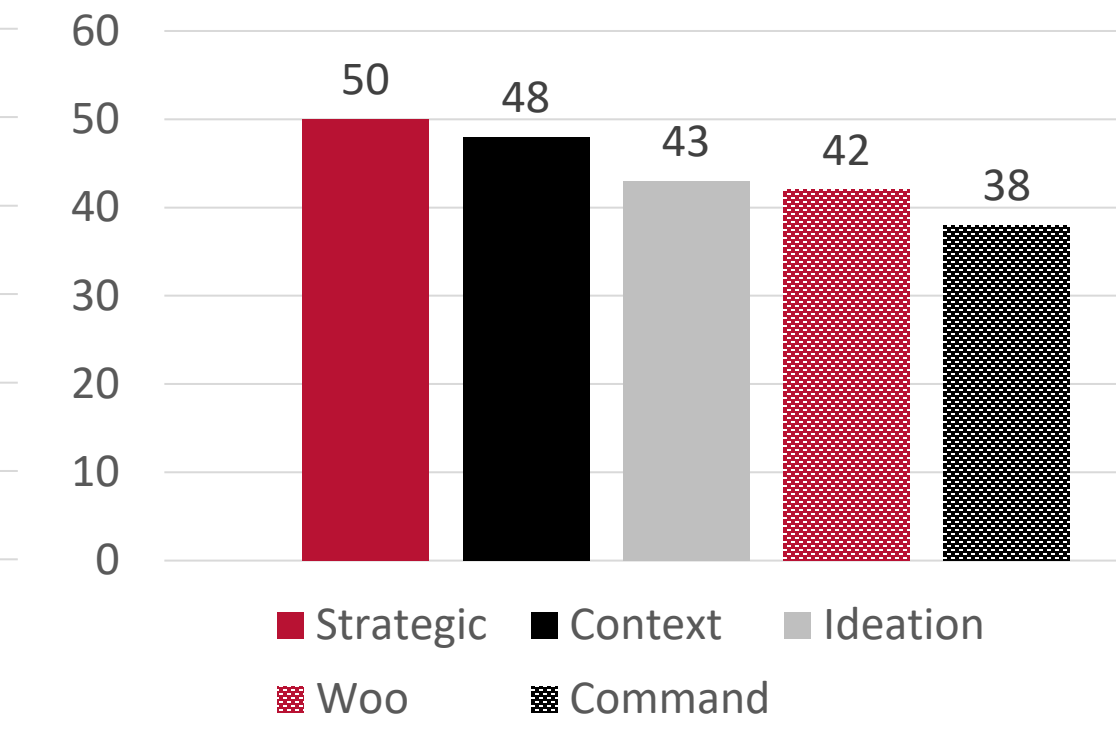


## RESULTS CONTINUED

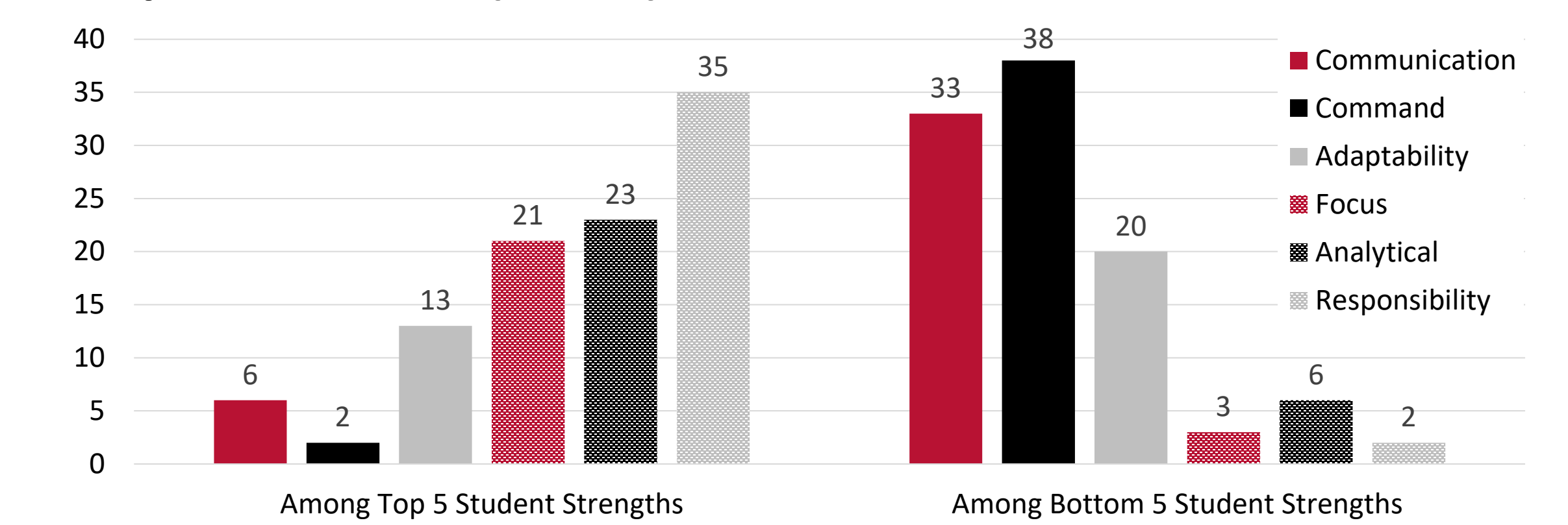
**Figure 3. Top Student Themes (n=128)**



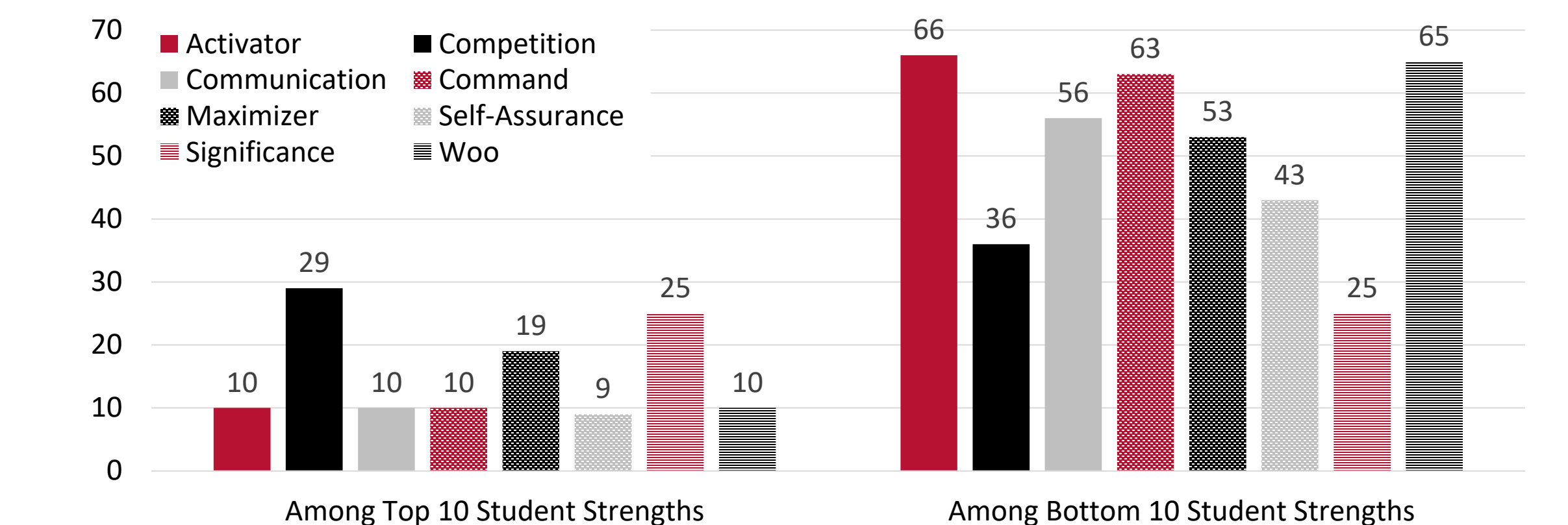
**Figure 4. Bottom Student Themes (n=128)**



**Figure 5. Comparison of Student Themes to Emergency Response Themes (n=128)**



**Figure 6. Student Themes in the Influencing Domain (n=128)**



## CONCLUSIONS

- PharmD students and practicing pharmacists possess few of the strengths that clinical pharmacists consider important for emergency cardiovascular response
- The "Influencing" domain appears to be important to emergency response, but is common among the bottom strengths of PharmD students
- Future research should investigate methods of teaching ACLS to PharmD students in ways that support their strengths and acknowledge their less developed themes

## REFERENCES

Bloom TJ. Comparison of StrengthsQuest Signature Themes in Student Pharmacists and Other Health Care Profession Students. *Am J Pharm Educ.* 2018;82(1):6142. doi:10.5688/ajpe6142  
Bond CA, Raehl CL. Clinical pharmacy services, pharmacy staffing, and hospital mortality rates. *Pharmacotherapy.* 2007;27(4):481-493  
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