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# Analysis of ASHP PGY1 Residency Placement Rates with Student Pharmacist Characteristics

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## BACKGROUND

- ❖ In 2006, the American College of Clinical Pharmacy (ACCP) recommended that by 2020, all pharmacists involved in direct patient care should complete at least a PGY1 residency after receiving their PharmD degrees.
- ❖ American Society of Health-Systems Pharmacists (ASHP) supports this recommendation.
- ❖ Because of the support for this standard and the increasing desire of institutions to hire residency trained pharmacists, the number of applicants has risen sharply over recent years.
- ❖ Securing a residency position has become increasingly competitive with the number of applicants outweighing the number of positions.

## OBJECTIVE

Identify student traits that correlate to success in the ASHP Resident Matching Program and align with residency program candidate characteristics.

## EVIDENCE

- ❖ Published literature examines the characteristics that residency program directors (RPDs) deem important in defining a successful resident.
- ❖ Subjective and objective characteristics hold equal importance when evaluating candidates.
- ❖ Concerns exist with institutions that do not have residency focused programs in place or faculty that may not provide appropriate professional guidance.

## Characteristics Identified as "Matchable"

- Strong subjective characteristics along with solid CV
- Dependable, self-motivated, professional, and a strong work ethic
- Competitive GPA
- Increasing number of residency applications and interviews
- Familiarity with residency preceptors
- Club leadership positions
- Work experience
- Synergistic letter of intent
- Strong letter of recommendation
- Maturity
- Prior degree or licensure
- Program fit

## MATERIALS AND METHODS

- ❖ Private Midwest Pharmacy College, IRB Approved
- ❖ SPSS v22 (IBM, New York)
- ❖ Two years of residency match data (n=137)
- ❖ Match rate for 2 years
- ❖ Analysis included only students that completed the process, not those that withdrew
- ❖ **Primary Outcome:** Successful match through all phases of the ASHP PGY1 match
- ❖ **Independent variables:**
  - PCOA scores
  - GPA
  - Professional organization involvement
  - Leadership positions
  - Capstone OSCE
  - Capstone pretest scores
  - Internship experience prior to APPE rotations
- ❖ Backward stepwise logistic regression
- ❖ Variables were removed one by one from the overall model based on variable with lowest F-to-remove statistic
- ❖ Statistic repeated until the best model design was statistically determined
- ❖ Correlation between variables and the model were evaluated by determining the R-squared and Goodness-of-Fit

## RESULTS

- ❖ One hundred eighteen students (86.3%) successfully matched through all phases of the ASHP match.
- ❖ Proposed model predicting 78 percent of the variance.
- ❖ Internship experience prior to graduation was the highest correlated variable (R = 0.54).
  - Initial analysis separated experiences into health-system and community, however the numbers were too small to be an effective variable.
- ❖ GPA and capstone pretest demonstrated a strong correlation to each other.
  - PCOA score had some correlation to GPA, however was low (R=0.29).
- ❖ Professional organization involvement was measured on ordinal scale with the overall number of organizations per student.
  - Participation was the key component rather than number of organizations.

## RESULTS

Independent Variable	R	OR (CI)	p-value
Internship Prior to APPE	0.54	17.4 (6.7, 18.6)	p < 0.001
Capstone Pretest Score	0.49	12.3 (7.2, 17.3)	p < 0.001
GPA	0.48	11.5 (3.3, 16.8)	p < 0.001
Leadership Positions	0.43	9.1 (1.7, 14.2)	p < 0.01
Prof Org Involvement	0.33	8.32 (2.5, 15.1)	p < 0.01
Capstone OSCE	0.27	5.24 (1.9, 9.8)	p < 0.01
PCOA Scores	0.25	5.11 (1.1, 8.6)	p < 0.01

## LIMITATIONS

- ❖ Results specific to single college of pharmacy.
- ❖ Two years of data reviewed.
- ❖ Did not measure all characteristics reported in the literature, including research/publication, internship hours, and APPE experiences.

## CONCLUSION

- ❖ Results consistent with publications and surveys of RPDs.
- ❖ Model indicates that pharmacy experience and leadership positions are important in the application process.
- ❖ Consistency of the model with other published literature provides a means to counsel student pharmacists who are interested in pursuing residencies on consideration of professional organization involvement, leadership, and internship experiences.

References available upon request.