

SKILLED TECHNICAL WORKFORCE: DEMAND, SUPPLY, & PATHWAYS A CASE STUDY

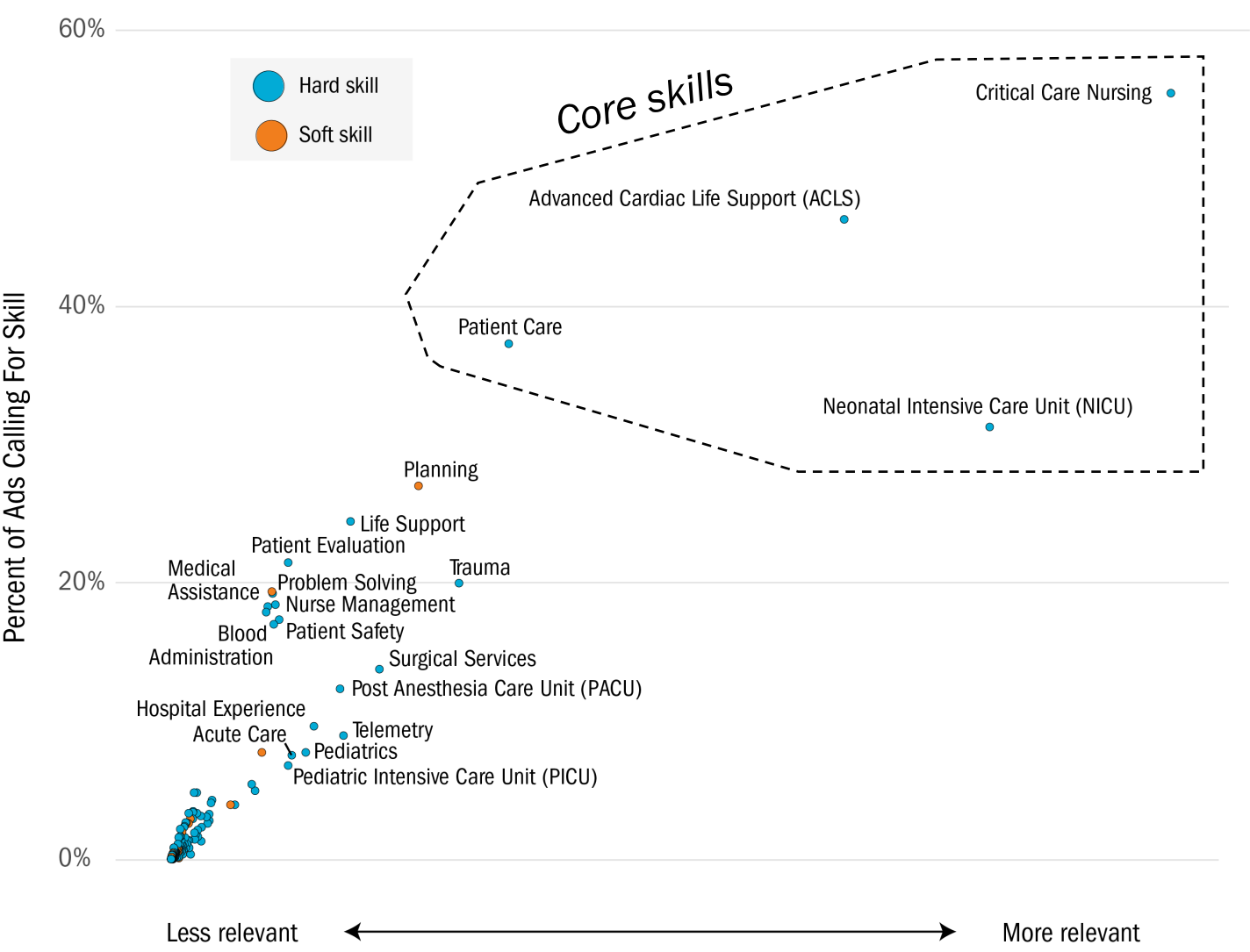
Fellow Alyssa Fowers (University of Miami), Students Calvin Isch (Indiana University) & Sarah McDonald (Marymount University)
Mentors Vicki Lancaster & Sam Cohen, Biocomplexity Institute and Initiative, University of Virginia

What skills are needed to enter in-demand jobs in the Skilled Technical Workforce? How does skill supply match with demand?

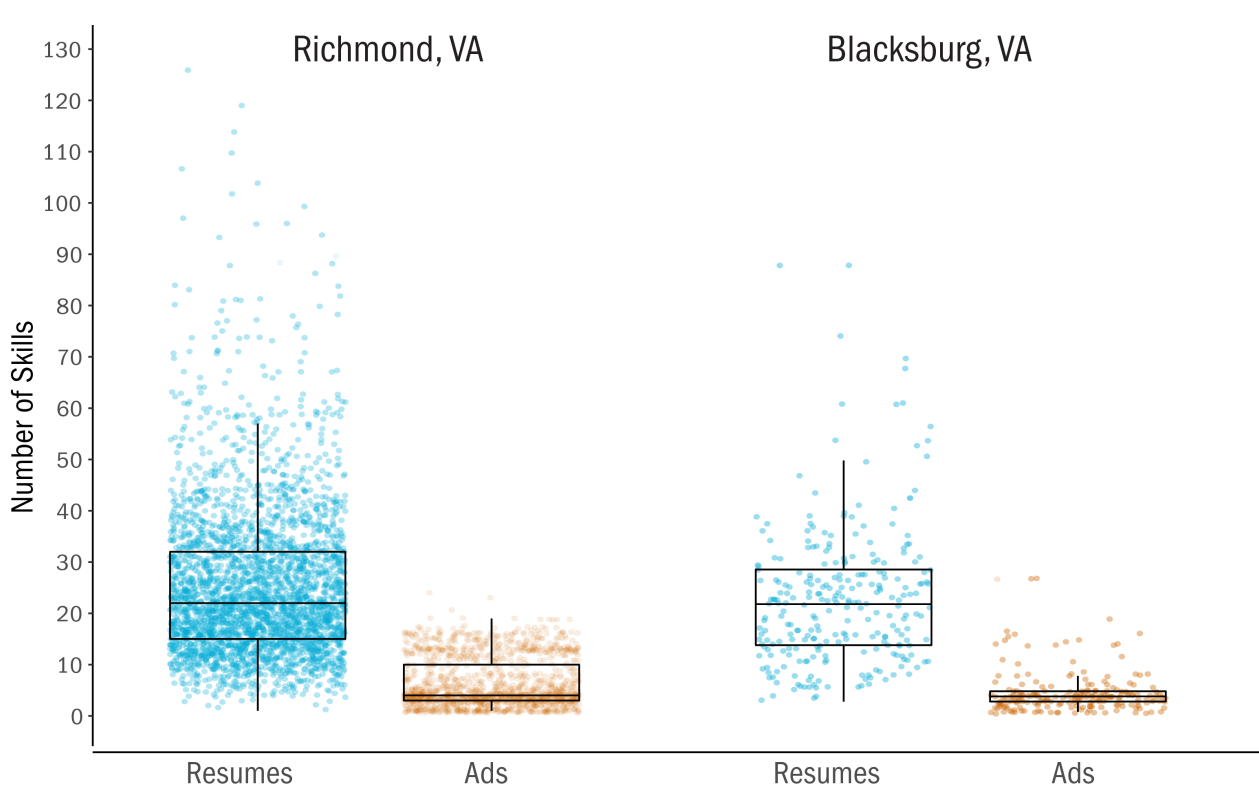
Skilled Technical Work (STW) requires a high degree of technical knowledge, but does not necessarily require a bachelor's degree. Skilled technical occupations offer a path to the middle class for workers without four-year degrees.

Neonatal Intensive Care Needed: Critical Care Nurses in Richmond, 2016-2017

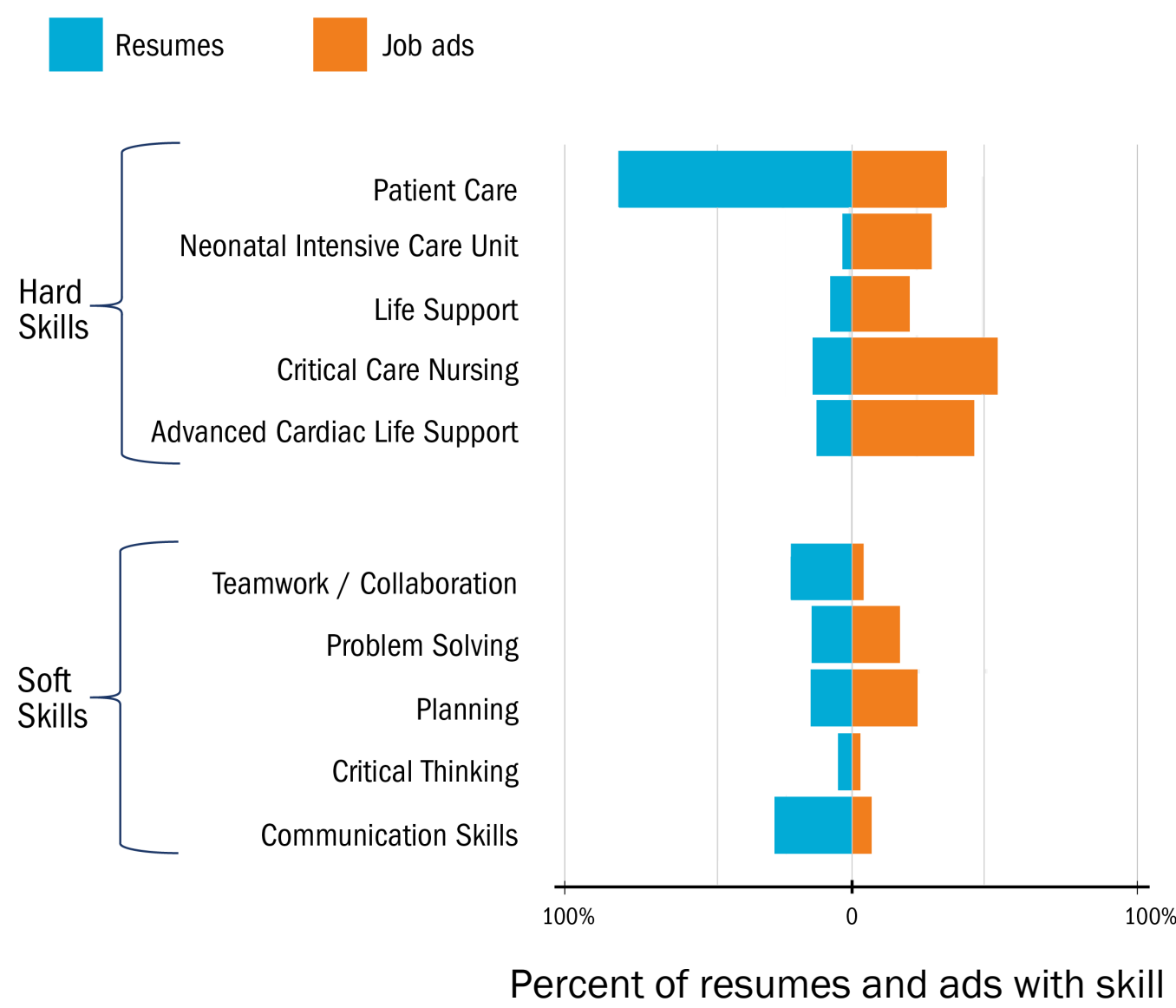
Most relevant skills for Critical Care Nurses



Count of Skills on Job Ads and Resumes *Resumes listed many more skills than job ads in both MSAs*

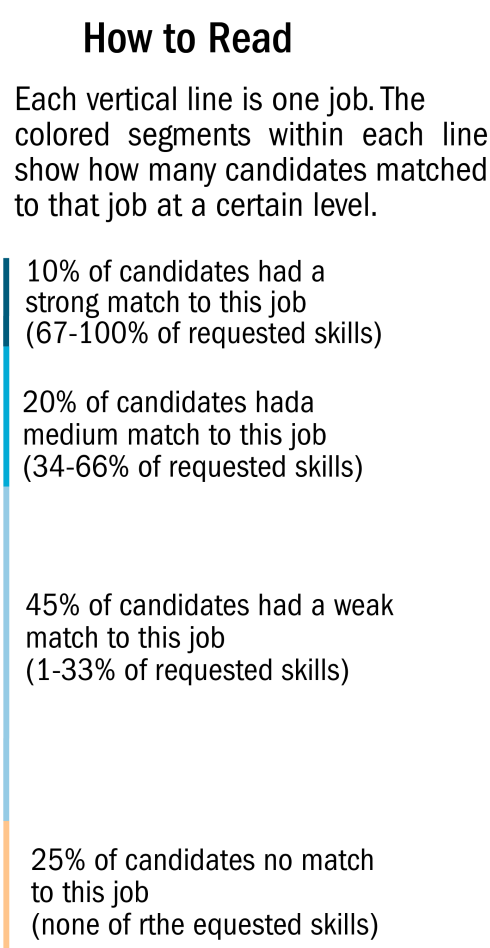


Top Five Hard and Soft Skills

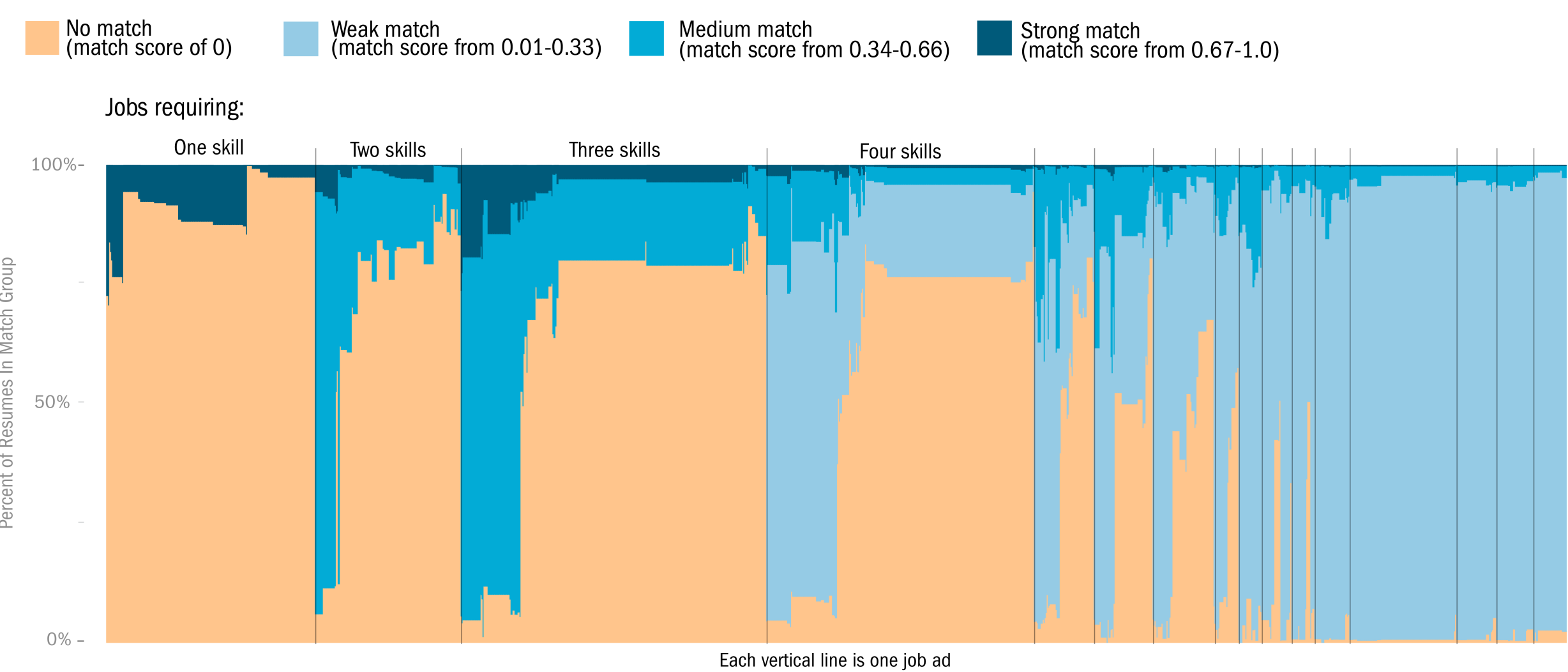


Matching Job Ads and Resumes

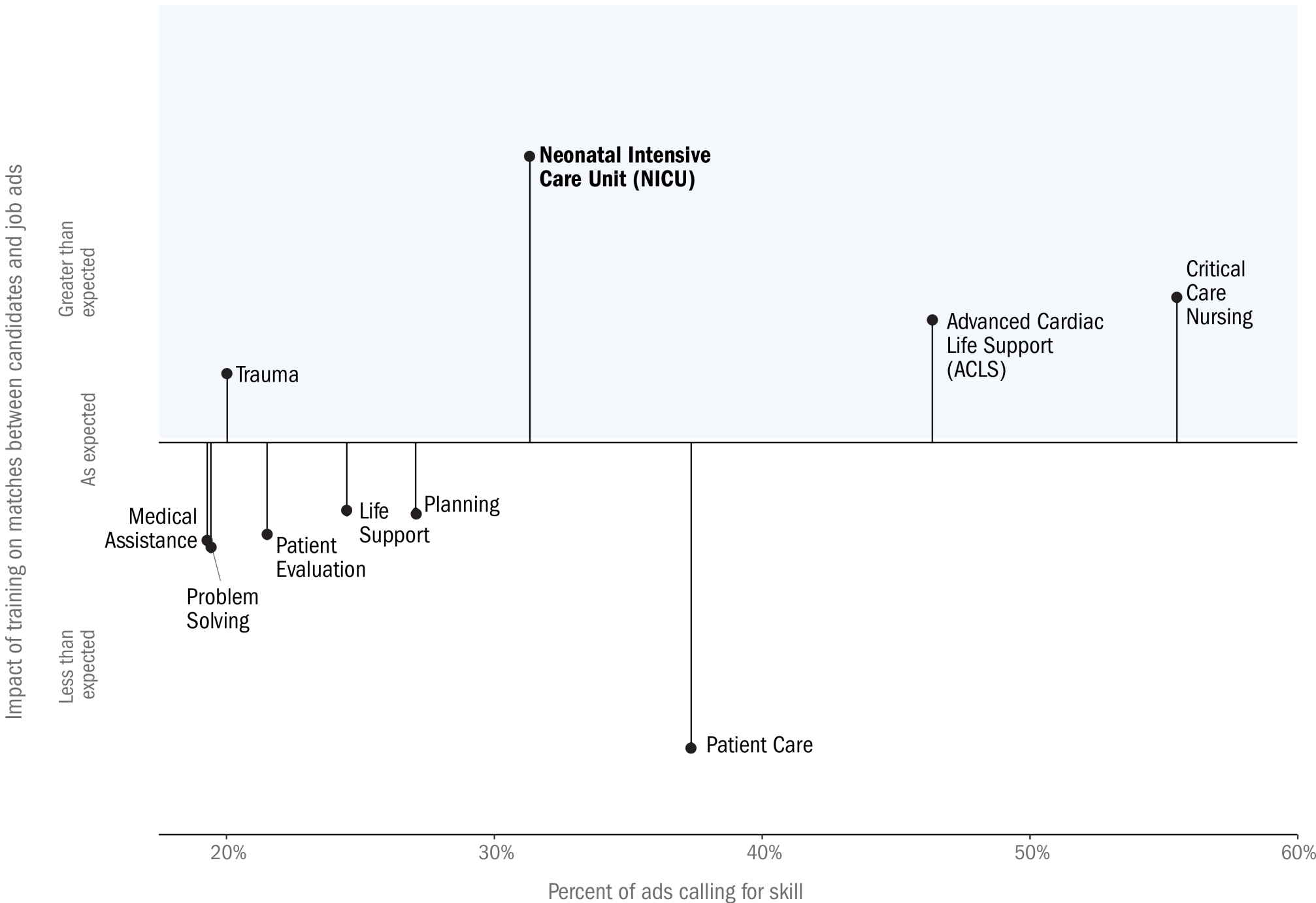
- Calculated the proportion of desired skills in each job that each candidate fulfilled (*match score*) and plotted the matches of all plausible candidates to Critical Care Nursing positions in Richmond (right).
- Training in the Neonatal Intensive Care Unit (NICU) skill would have the largest impact on improving match scores (below).



Matches between job ads and candidates: Critical Care Nurses 1,609 job ads matched to 3,150 candidates in Richmond, VA



Impact of skill training on matches to Critical Care Nursing jobs Richmond, VA, 2016-2017



Pathways to Critical Care Nursing

- Candidates must have first be registered nurses (RN). Six institutions in Richmond and one in Blacksburg offer associate's degrees in nursing.
- An RN can complete a Critical Care Nurse Certification (CCRN) or a Neonatal Intensive Care Nursing certification (RNC-NIC) by working with their target patient population and passing an exam.

