Clinical Clerkship Grade Distributions

Cooper Gardner, Jackson Gregory MD

DHMC Orthopedics

Dartmouth-Hitchcock

Dartmouth GEISEL SCHOOL OF MEDICINE 1797

Introduction

US medical Residency applications and matching is an incredibly competitive and complicated process that is continuing to grow. In 2021 a record 48,700 registrants (an 8% increase from 2020) applied for 38,106 positions (2% increase from 2020.[1]) On top of the increasing volume of applicants, residency directors are facing an additional challenge of decreasing objective data points, particularly with USLME's announcement that Step 1 is transitioning from a numeric score to pass/fail only for exams taken on or after 1/26/22.[2] In a previous survey of national residency program directors ranking the importance of academic selection criteria, Step 1 scores were ranked 2nd most important. Grades in required clerkship rotations and grades in senior elective specialty rotations were ranked 1st and 3rd respectively, in terms of their significance.[3] With Step 1 becoming pass/fail, one can predict that the weight of clerkship grades will gain an even larger importance.

Data on clinical rotation performance for applicants should be found in their Medical Student Performance Evaluations (MSPE). The AAMC recommends that all medical schools follow a standard format for their MSPE's with information on a student's clinical rotation performance detailed in the academic progress section. They request that graphic representation of a students' comparative performance be incorporated along with the components of each clerkship grade and the weight of each component.[4] Even with these AAMC recommendations, much of the data that is supposed to be contained with the MSPE are incomplete and subject to wide variability across schools. Approximately half of US MD school do not follow the recommended guidelines.[5]

For medical schools that do follow AAMC guidelines and provide comparative graphical data, there is large variability in the number of grade categories possible. For example, some schools use on pass/fail systems while others use honors/pass/fail and still many more use even larger numbers of categories. Additionally, there is inconsistency with the descriptors of each grade category such as different schools naming their highest-grade category "honors", "outstanding" or "excellent." Finally, there is disparity amongst schools in the relative number of students placed into individual categories.[6]

With the already critically important clerkship grades gaining even more significance due to Step 1 changes and the vast variability amongst medical schools in their system of grades, ranking residency applicants has become more challenging than ever. We aim to investigate how the use of different grading scales effects the percentage of highest-grade during core clerkships. Additionally, we examine if the distribution of grades awarded during clinical clerkships has changed over time.

Methods

Data from Electronic Residency Application Service (ERAS) submitted to the Dartmouth Orthopaedics residency program was de-identified and extracted pertaining to grades awarded at medical schools across the country from each academic year between 2009 and 2021. A program was used on to extract numerical data when only graph distributions were provided. Schools were divided into cohorts based upon the methodology of grading employed by the school.
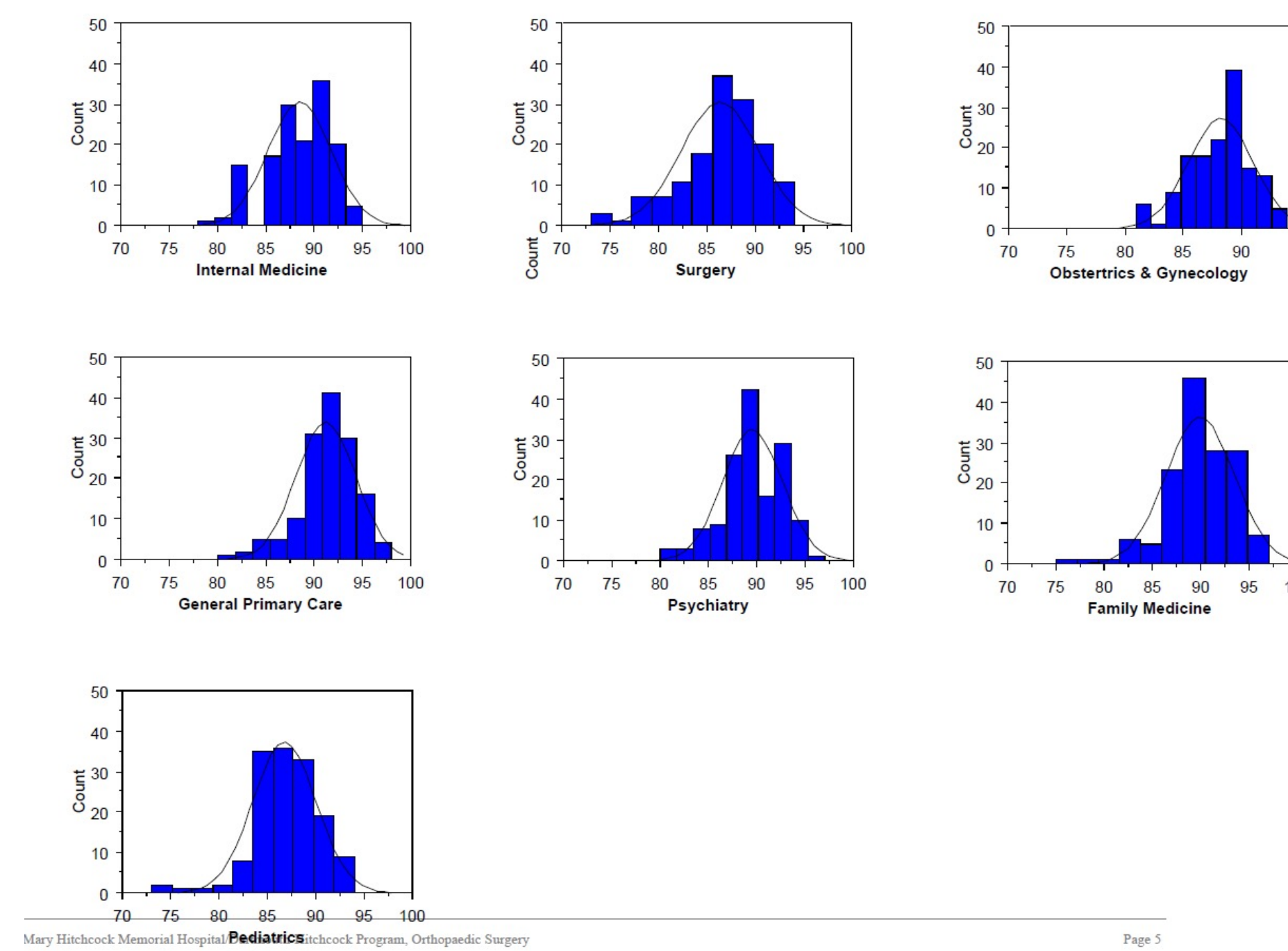
Examples of 3 different schools MSPE graphical data
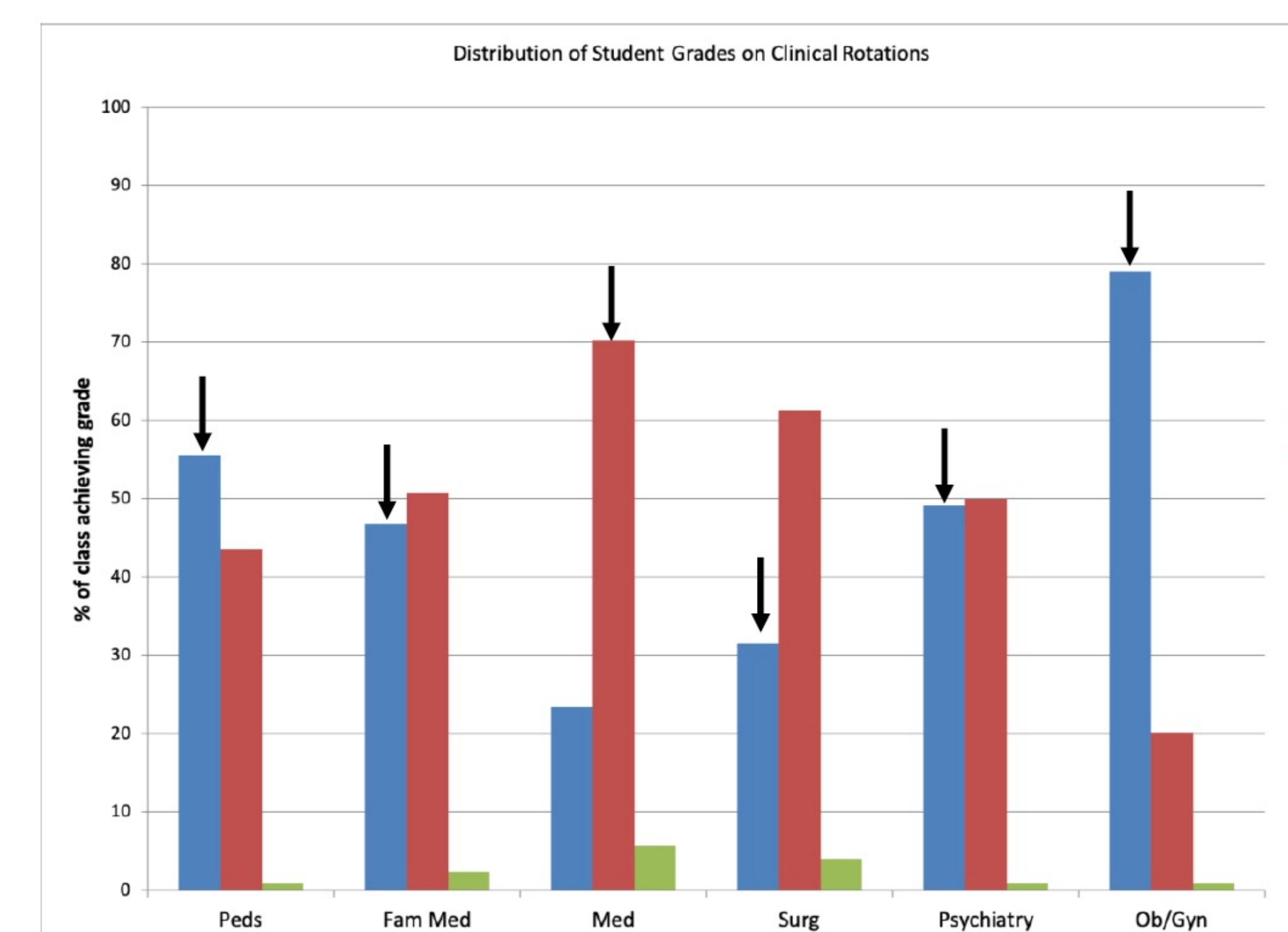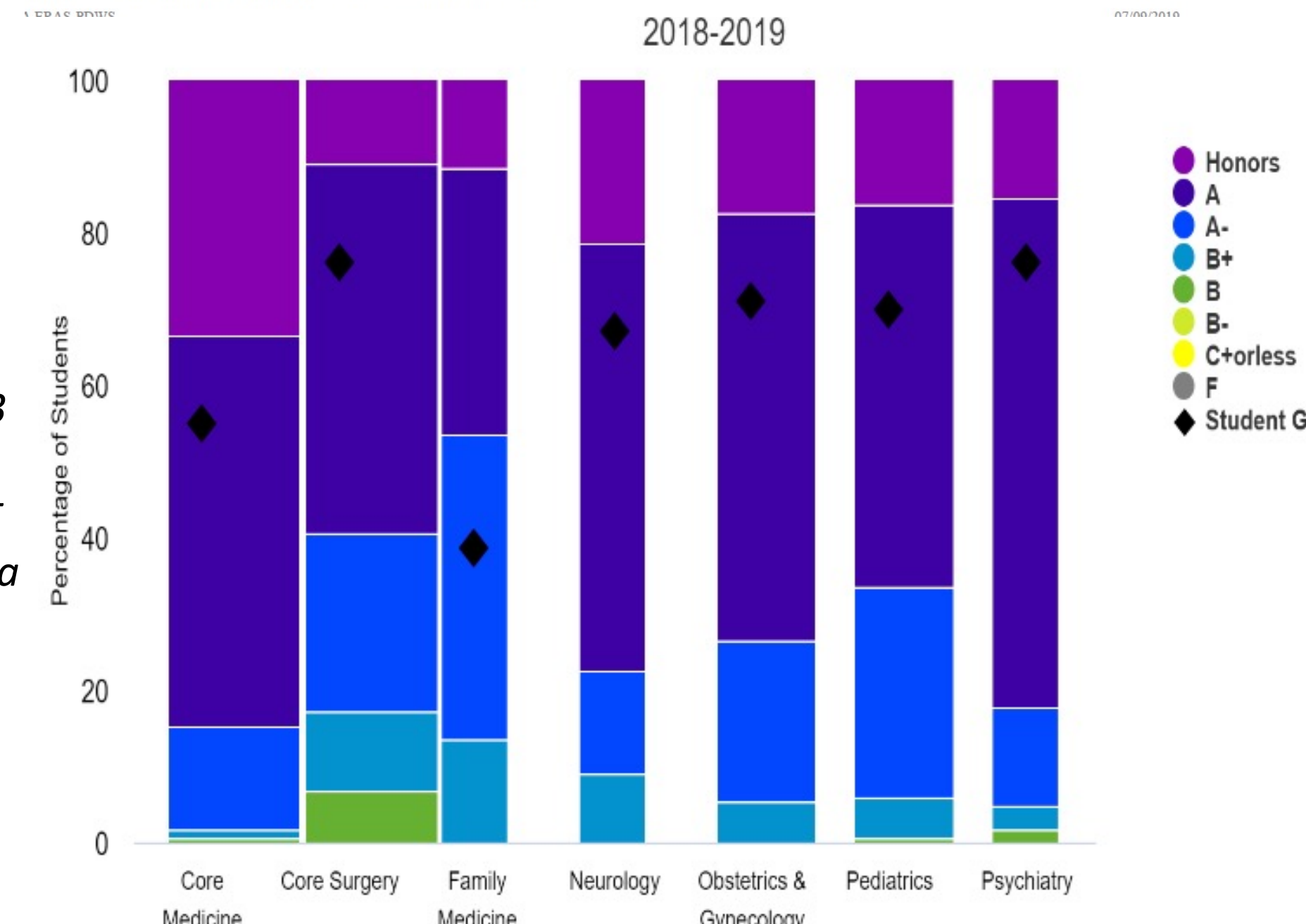
Aims

We aim to demonstrate that the differences in number of grading categories effects the relative distribution of grades assigned to students with a particular emphasis on the proportion of students receiving the top grade. Additionally, from the preliminary data we expect to make evident that schools around the country have been inflating the grades of their students over the studied time interval. Otherwise put, we are investigating if schools have been increasing the proportion of all their students scoring in higher categories and are skewing away from a bell curve towards the right over time. The data is still currently in the stage of being analyzed and statistical analysis being computed.

References

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Contact

Cooper.C.Gardner.MED@Dartmouth.edu