Work environment in emergency medicine needs to be improved

**Background:** Emergency medicine (EM) is a novel specialty in Denmark. So far there are only 111 board certified specialists in EM in Denmark ~5 per Emergency department (ED). We hypothesize that stressful ED work environment may impact EM recruitment. The aim of our analysis was to evaluate the rate of applicants for EM junior and senior residency and relate it to ED patient complaint rate and work environment.

**Methods:** We evaluated EM junior residency applications; and we calculated the rate of unfilled versus posted EM senior residency appointments in Denmark in 2020. As received by The Danish Agency for Patient Complaints we compared complaints from patients received over a 3-year period for EM, Respiratory medicine (RM), Cardiology (Card) and Endocrinology (Endo). One-way analysis of variance was performed to assess overall significance which was followed by a Tukey studentized range test procedure to locate the possible differences. We anonymously asked affiliated EM junior residents to qualify the reason for their application and whether they intend to apply for senior residency.

**Results** We found a surplus of EM junior residency applications. Thus, positions were easily filled. Conversely unfilled senior EM residency appointments in Denmark amounted to 31 out of 52 posted appointments, meaning that 59% of EM senior residency appointments were unfilled. Patient complaints amounted to (means±SEM) EM 333±55; RM 88±9; Card 113±17; Endo 58±8, meaning a 3 to 5fold higher patient complaint rate in EM (p < 0.0006). There were no statistical differences in patient complaints among RM, Card and Endo. Among 8 EM junior residents 63% expressed interest in an EM career as the reason for their application but following EM experience none intended to apply for senior residency.

**Conclusion:** More than half of posted senior residency positions in EM remain vacant. Patient complaints are significantly frequent in EM compared to other medical specialties. Junior residents are reluctant to pursue senior residency. Stressful ED working environment needs to be improved to facilitate EM recruitment.