Is Chief Resident Operative Volume Associated with Milestone Competency Achievement?

Ilana G. Margulies, MS, Hope Xu, BA, Farah Sayegh, MD, Paymon Sanati-Mehrizy, MD, Felipe Molina-Burbano, MD, Michael Ingargiola MD, Peter J. Taub MD, MS
Disclosures

I have nothing to disclose.
Competency Evaluations in Plastic Surgery

- Milestones established by the ACGME in Plastic Surgery to provide competency based evaluations in resident training
  - 36 Milestones covering reconstructive, cosmetic, and general competencies
- Goals of improving resident education and individualizing training length
- Paucity of literature studying association of Milestones competencies and clinical exposure
Association of Milestones Competences and Operative Volume: Building on Prior Research

- No significant association between chief resident cosmetic case volume and respective Milestone achievement
  - Facial aesthetics
  - Non-cancer breast surgery
  - Cosmetic trunk and lower extremity
Aim of the Present Study:

Evaluate the relationship between chief resident case volume and respective reconstructive and general Milestone competencies
Methods

Operations by 8 chief residents at primary training hospital (2015 – 2018)

Reconstructive cases isolated and categorized: tissue transfer, congenital anomalies, head and neck etc.

Evaluate the association between Milestone achievement and operative volume with Spearman’s rank correlation coefficient (p<0.05)
No statistically significant association found between Milestones achievement and resident case volume.
Association of Milestones and Chief Resident Case Volume

No statistically significant association found between Milestones achievement and resident case volume
No statistically significant association found between Milestones achievement and resident case volume.
Only significant finding was a negative association between upper extremity trauma case volume and medical knowledge Milestone.
Discussion

• Overall lack of significant association between chief resident case volume and Milestones suggests non-linear relationship between competency achievement and clinical exposure

• Importance of also examining how Milestones evaluations are determined
  • Ongoing research into looking at the structure of CCC meetings nationwide
Limitations

- Minimal variation in chief resident Milestone achievements
- Small sample size, single center study at one training site
- Restricted use of single year case volume as opposed to compounded case volume taking into account prior operative experience
Conclusion and Future Research

- No overall significant association found between chief year case volume and respective Milestones achievements
- Future and ongoing studies:
  - To investigate the relationship between Milestones competencies and resident case volume throughout all years of Plastic Surgery training
  - To examine nature of CCC meetings nationwide