

Prevalence and Extent of Industry Support for Program Directors of US Surgical Fellowship Programs

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Introduction: Fellowship Program Directors (PDs) have significant influence on the training and education of fellows. The Physician Payment Sunshine Act, enacted in 2013, mandates reporting of industry support of physicians and teaching hospitals, making such relationships more transparent. PDs supported by or associated with industry may provide disproportionate influence on trainees with regards to the use of particular products or techniques. The purpose of this study is to document industry support of PDs across surgical subspecialties and assess the prevalence of industry support within specific subspecialties.

Methods: Fellowship PDs for Colon and Rectal Surgery (CRS), Minimally Invasive Surgery (MIS), Breast, Hepato-Pancreato-Biliary (HPB), Endocrine, Surgical Oncology, Burn, Cardio-Thoracic (CT), Pediatric, Vascular, Critical Care, Acute Care, and Plastic Surgery for 2017 were identified using the Association of Program Directors website. CMS Open Payments Database for 2017 was queried, and general payments, research, associated research payments, and ownership were obtained. General payments included payments not associated with a research study. Associated research payments included funding for a research project or study where the physician is named Principal Investigator. Ownership represented the dollar amount invested in companies or investment interest. The national mean and median payouts across subspecialties were used to determine PDs with significant industry support.

Results: Surgical subspecialties with the most PDs receiving any industry support, regardless of amount, included Vascular (93.5%), Cardio-Thoracic (92.8%), MIS (90.5%), Plastics (85.3%) and CRS (81.0%). MIS had the highest percentage of PDs (40.5% above mean, 72.4% above median) with significant industry support via General Payments, followed by Vascular (33.6% above mean, 66.4% above median), and CRS (29.3% above mean, 53.4% above median). Cardio-Thoracic Surgery had the highest mean (\$13732) and median (\$833) amount of support via General Payments.

Conclusions: A substantial number of subspecialty fellowship PDs receive industry support with a disproportionate number of PDs within MIS, Vascular, and Colorectal Surgery receiving significant support. Overall industry support amount in General Payments was highest in Cardio-Thoracic Surgery, which also had one of the highest percentage of PDs receiving any industry support. Further research into the advantages and disadvantages of industry support on the education and training of surgical fellows should be conducted. We advocate for complete disclosure of industry support by Fellowship PDs to trainees due to potential conflict of interest.

Specialty	# of programs	Specialty mean general payment (\$)	# of PD above specialty mean	% PD paid above specialty mean	Specialty median general payment (\$)	# PD paid above specialty median	% PD paid above specialty median	min payment (\$)	max payment (\$)
CRS	58	4077	17	29.3	380	31	53.4	44	136259
MIS	116	2871	47	40.5	199	84	72.4	10	382368
Breast	48	4930	9	18.8	222	25	52.1	23	52337
HPB	13	2871	3	23.1	199	6	46.2	34	153414
Endocrine	23	2871	5	21.7	199	10	43.5	12	25067
Surg Onc	22	4930	5	22.7	222	11	50.0	14	86312
Burn	20	1467	1	5.0	147	5	25.0	31	2073
CT	69	13732	8	11.6	833	33	47.8	9	339455
Pediatric	45	928	3	6.7	60	9	20.0	6	2019
Vascular	107	4641	36	33.6	780	71	66.4	31	228435
Critical Care	117	1960	9	7.7	125	36	30.8	10	46727
Acute Care	20	1467	3	15.0	147	6	30.0	12	31563
Plastics	68	3881	12	17.6	277	36	52.9	14	55413

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