



Financial Disparities in Microsurgical Reconstruction: Analysis of Reimbursement for Head and Neck versus Breast Free Flaps

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Background

- Microsurgery is a highly specialized skill with a steep learning curve
- Differences exist between head and neck (H/N) and breast microsurgery in patient and case complexity
- Disparities in compensation may disproportionately reflect case complexity

Purpose *Analysis of provider & hospital reimbursement in H/N vs. DIEP microsurgery*

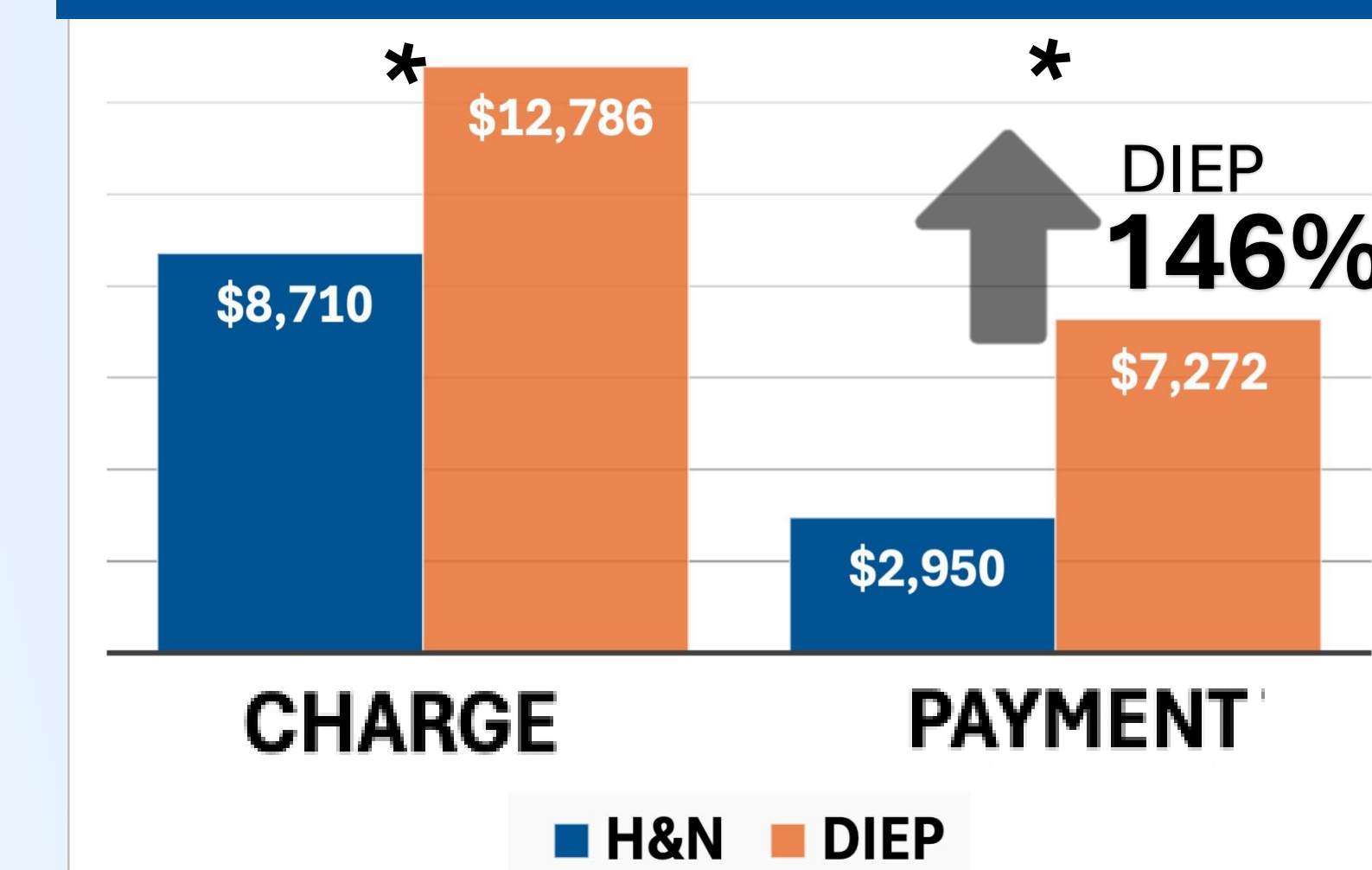
Methods

- Retrospective review at single state funded institution from 2016 -2023
- H/N vs breast microsurgical reconstruction
- Demographics: payer source, operative time, length of stay, total complications
- Primary outcomes: provider & hospital charge, payment, write-off

130 Patients Underwent H/N Flaps & 140 Underwent DIEP Flaps

Variable	H/N Flap N=136	DIEP Flap N=140	
Private insurance	63 (46.3%)	92 (65.7%)	
Medicaid	16 (11.8%)	11 (7.9%)	
Medicare	2 (1.5%)	0	
Other Government	6 (4.4%)	7 (5%)	
Self-Pay	49 (36%)	30 (21.4%)	
Operative Time	546.7 min (SD 142.1)	569.8 min (SD 108.7)	.133
Length of Stay	12.9 days (SD 9.8)	5.3 days (SD 4)	<.001
Complications per Patient	1.4 (SD 1.5)	1.9 (SD 1.8)	.033
Provider Charge Per Patient	\$8,710 (SD 3,152)	\$12,786 (SD 6,166)	<.001
Provider Payment Per Patient	\$2,950 (SD 2,161)	\$7,272 (SD 5,003)	<.001
Hospital Write-off of Provider Charge Per Patient	\$4,343 (SD 2,767)	\$5,093 (SD 4,368)	.090
% Medicaid Reimbursement (Payment/Charge)	29.9% (SD 18.7)	53.4% (SD 18.4)	.003
Hospital Charge Per Patient	\$213,361 (SD 128,531)	\$87,167 (SD 19,659)	<.001
Payment to Hospital Per Patient	\$49,930 (SD 56,654)	\$17,593 (SD 8,932)	<.001
Hospital Write-off of Hospital Charge Per Patient	\$159,303 (SD 108,571)	\$69,308 (SD 19,207)	<.001
Provider Charge/Operative Time (USD/minute)	\$16.93 (SD 6.71)	\$22.61 (SD 10.39)	<.001
Payment to Provider/Operative Time (USD/minute)	\$5.81 (SD 4.66)	\$13 (SD 8.93)	<.001
Hospital Charge/Length of Stay (USD/day)	\$15,424 (SD 10,328)	\$20,712 (SD 18,857)	.005
Payment to Hospital/Length of Stay (USD/day)	\$3,353 (SD 4,013)	\$4,172 (SD 3,886)	.102

Provider Reimbursement



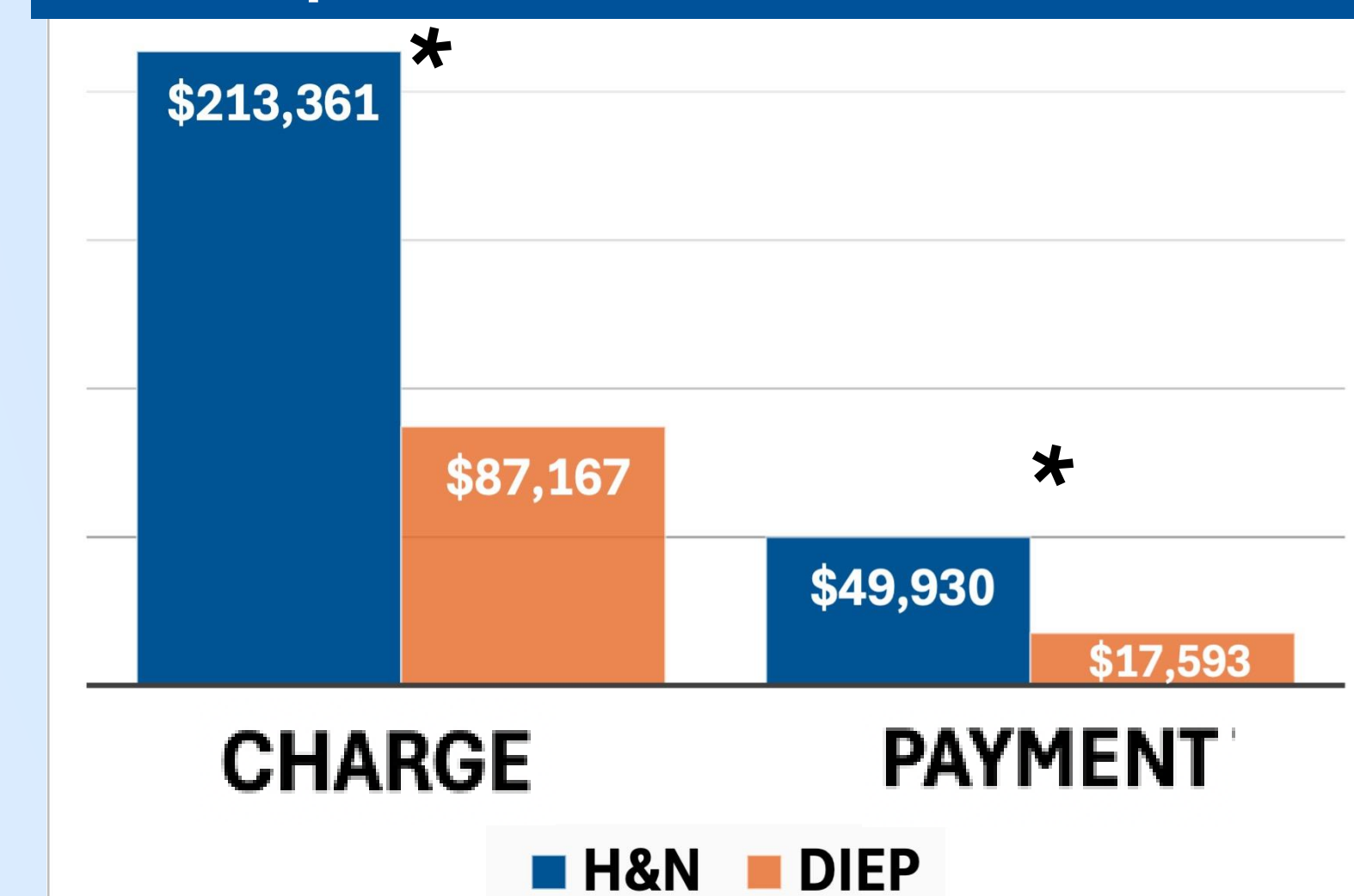
Provider Charge/Operative Minute

H/N \$16.93 per minute DIEP \$22.61 per min

Provider Payment/Operative Minute

H/N \$5.81 per minute DIEP \$13 per minute

Hospital Reimbursement



Hospital Charge/Length of Stay (USD/day)

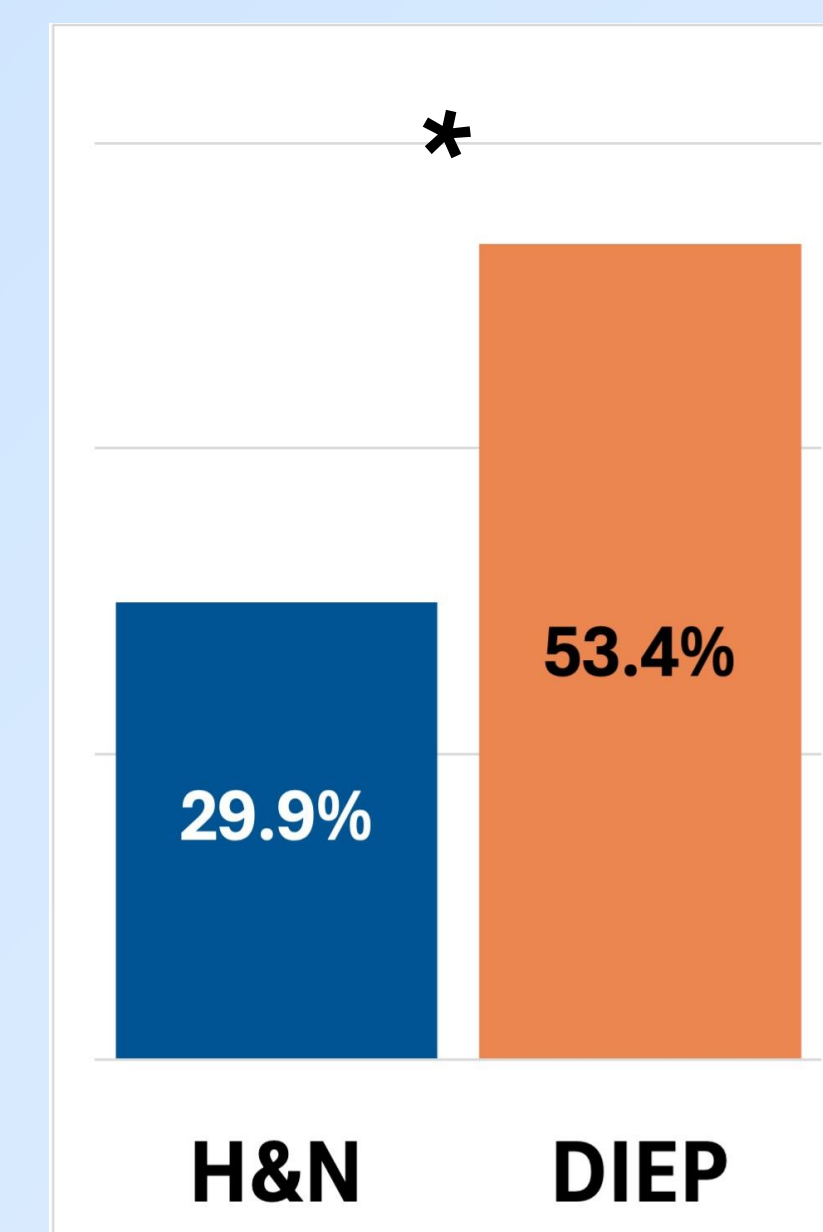
H/N \$15,424 per day DIEP \$20,712 per day

Hospital Payment/Length of Stay (USD/day)

H/N \$3,353 per day DIEP \$4,172 per day

DIEP flaps are more efficient per minute and per day

% Medicaid Reimbursement to Provider



Medicaid reimburses nearly 2x more for DIEP flaps than H/N

Conclusions

- Providers are reimbursed more overall and per minute for DIEPs
- Hospitals are reimbursed more overall for H/N flaps, DIEP flaps are more efficient per day and per operative minute
- Medicaid heavily favors DIEP flap reimbursement
- Undervaluation of complex microsurgery affects accessibility



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