Trends in Medicare Utilization and Reimbursement for Intertrochanteric Femur Fractures: A 21 Year Review

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Background

- Sliding hip screw (SHS) and intramedullary (IMN) constructs are commonly utilized treatments for stable intertrochanteric (IT) femur fractures.
- For stable IT fractures the SHS is as effective as the IMN but reported to be 20-40% cheaper. Despite these findings, most surgeons utilize the IMN for fixation of stable IT fractures.
- The purpose of this study was to evaluate surgeon preference and economic trends in IMN versus SHS for fixation of IT fractures among the Medicare population from 2000-2021.

Methods

- The publicly available "Medicare Part B National Summary Data Files" was queried for two Current Procedural Terminology (CPT) codes: CPT 27244 (open treatment of pertrochanteric with plate/screw type implant) and CPT 27245 (treatment of pertrochanteric femoral fracture with intramedullary implant).
- Factors examined included: procedure volume, charges, and true physician reimbursement for all services billed to Medicare for years 2000 to 2021.
- All monetary data was adjusted for inflation to the most recent listed data year of 2021 using the United States Consumer Price Index (CPI)

Figures/Tables

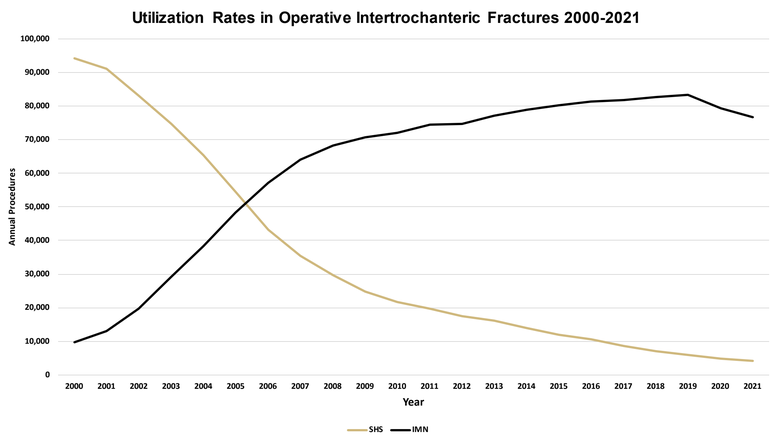

Table 1
Change in Annual Utilization Rates in Medicare Part B By Surgery

Procedure	Procedure Volume Year 2000	Procedure Volume Year 2021	Total Change 2000-2021	Average Year-Year % Change	Total Procedure % Change 2000-2021
SHS	94,223	4,224	-89,999	-13.65%	**-95.52%**
IMN	9,648	76,667	67,019	11.47%	**694.64%**
Average	103,871	80,891	-22,980	-1.17%	**-22.12%**

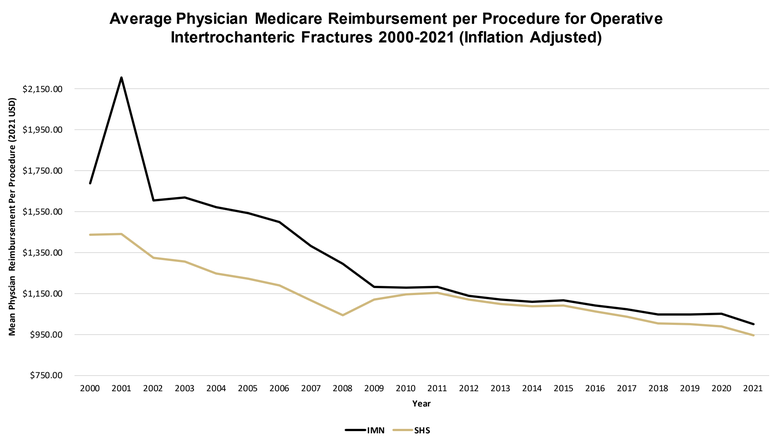

Table 2
Inflation Adjusted Change in Annual Medicare Reimbursement to Physicians by Surgery

Procedure	Reimbursement 2000 (USD)	Reimbursement 2021 (USD)	Average Year-Year % Change	Total % Change 2000-2021
SHS	$1,435.76	$943.36	-1.93%	**-34.30%**
IMN	$1,688.14	$999.88	-2.03%	**-40.77%**
Average	$1,459.20	$996.93	-1.75%	**-31.68%**

*Inflation Adjusted

Table 3:
Inflation Adjusted Medicare Part B Charges vs Reimbursement 2013 - 2020

.	Procedure	Year 2013 (USD)	Year 2020 (USD)	Gross Change (2013-2020)	% Change (2013-2020)	Cost Difference SHS vs DHS 2020 (USD)
Charges	IMN	$4,177.29	$4,100.28	-$77.01	**-1.88%**	**$303.18**
	SHS	$3,763.76	$3,797.10	$33.34	**0.88%**	
Reimbursement	IMN	$880.58	$805.62	-$74.96	**-9.30%**	**$52.56**
	SHS	$864.38	$753.06	-$111.32	**-14.78%**	

Results

- From 2000-2021 a total of 1,361,112 IMN and 739,032 SHS implants were billed to Medicare for IT femur fractures. Over this 21-year period the number of operative IT femur fractures decreased by 29%.
- After adjusting for inflation, physician reimbursement for SHS decreased by 34% while IMN decreased by 41% from 2000-2021.
- Utilization of IMN increased 695% (9,648 to 76,667), while utilization of SHS decreased by 96% (94,223 to 4,224).
- Charges for IMN were on average 8% higher than SHS, while reimbursement for IMN resulted in a 6% higher reimbursement than SHS

Conclusions

- Physician reimbursement for operative IT fractures has decreased significantly.
- Despite equivocal outcomes to the SHS, the IMN remains the preferred implant for IT femur fracture fixation amongst orthopedic surgeons.
- Although the cost of IMNs is approaching SHS, the IMN remains the slightly more expensive implant.
- This study would advocate the use of a SHS for stable IT fractures given healthcare costs.

References

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