



# Transferring Best Practice in Orthopaedic Care for the Total Hip Arthroplasty Patient from the United States to the United Kingdom

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## B A C K G R O U N D

In 2000, The Royal College of Surgeons of England and the British Orthopaedic Association released a study on national hip replacement outcomes and the long waiting lists for elective surgery. The report revealed the following:

- ▶ Length of stay for 57% of the patients was 8 to 12 days
- ▶ Surgery wait times were 12-18 months
- ▶ Poor Clinical outcomes - 23% of patients reporting severe walking restrictions and 26.3% reporting limping problems.

Recommendations:

- ▶ Reduce length of stay.
- ▶ Collaborate with a highly reputable institution with demonstrated expertise in elective Orthopaedic care.
- ▶ Build a new hospital to replace five NHS trusts whose data was used in the report.

Hospital for Special Surgery, New York City (HSS), was selected as the resource collaborator for this project. The knowledge transfer project from Hospital for Special Surgery, USA to the Southwest London Elective Orthopaedic Center (SWLEOC), UK was designed to improve patient care, clinical outcomes, and surgical/hospital throughput for total hip arthroplasty patients. This analysis demonstrates the achievement of these goals, and that the length of stay for total hip surgery was reduced to approximately half the former value.

## METHODS & PROGRAM DESCRIPTION

This descriptive study includes a historical control and comparison to the current norms at the resource partner. The data was collected on patients undergoing total hip replacement at the South West London Elective Orthopaedic Center, SWLEOC, from January to December 2004, the first twelve months of hospital operation.

SWLEOC is the new hospital replacing the 5 NHS trusts whose data was reported in 2000 and serves the same population. SWLEOC opened mid-January, so to allow for start up, data was analyzed from February through December 2004, n=6 15 primary unilateral total hip patients. The results are compared to the values reported in the 2000 report and to equivalent data from HSS, n 1506 primary unilateral total hip replacements in the same period 2004.

All data was collected and handled in accordance with HIPPA and European privacy regulations. The key quality concepts transferred from the HSS to the U.K. team were surgical and hospital throughput, the hospital facility design, a standardized Interdisciplinary Preoperative Patient Education Program, the infection control standard and a standardized rehabilitation model. This was accomplished over 3 phases spanning 36 months:

- ▶ Phase I, the first 12 months dedicated to building the foundation.
- ▶ Phase II, bridging the cultural gap, a 24 month long process including the development of a Clinical Pathway Design and the implementation of Continuous Quality Improvement (CQI) Management methods.
- ▶ Phase III, preparing for the opening and finalizing the clinical pathway and protocols.

		Female			Male	
	n	mean	SD	n	mean	SD
SWLEOC	408			207		
Age (y)		71	11		68	13
LOS (d)		6.2	3		5.9	3
HSS	842			664		
Age (y)		66	13		62	13
LOS (d)		4.5	1.6		4.3	7

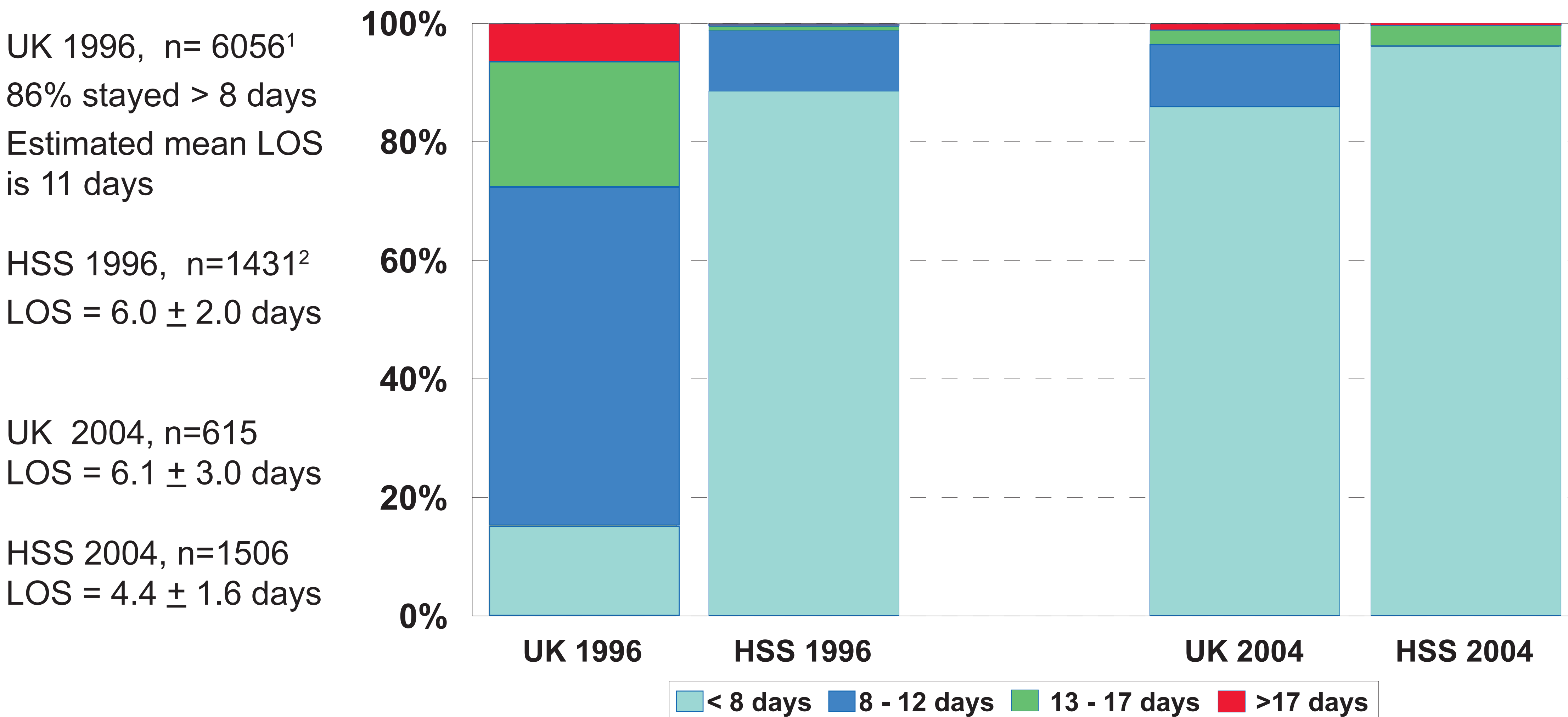
UK vs HSS  
Age p<0.001  
LOS p<0.001  
Sex p<0.001

## KEY FINDINGS & RESULTS

- ▶ In 2004, the average length of stay in the new hospital was 6.1± 3.0 days, down from the values reported in 2000 for the years 1996-97, p<0.001.
- ▶ In the earlier period 15% stayed 8 days or less, compared with 86% in 2004.
- ▶ Overall length of stay for all procedures at the new institution was on target at less than 5 days.
- ▶ The infection rate by MRSA in the new hospital was 0%, compared to 9% in the 2000 report.
- ▶ Waiting times were shortened significantly, with patients being admitted on the same day of surgery.
- ▶ Preoperative preparation for the patient and family was at 95% participation rate, and patient satisfaction and compliance were greatly enhanced.
- ▶ Aggressive standardized rehabilitation protocols enabled the patient to achieve the desired functional milestones: walking with a cane on level surfaces and stairs prior to being sent home.

## Length of Stay

Percentages as reported in the 2000 report



## C O N C L U S I O N

Best practice knowledge transfer can be accomplished. Despite cultural differences, this international collaboration resulted in a reduced length of stay and a model which maximized hospital operational flow and throughput. With careful planning and a rigorous structure of the implementation of new practices, a state-of-the-art elective orthopaedic center was produced, and patients of the SWLEOC are receiving better outcomes, high quality, dedicated service, and improved quality of life.

## REFERENCES

1. National Total hip replacement outcome study: Final report to the Department of Health January 2000 (revised June 2000) A joint report from the Royal College of Surgeons of England and the British Orthopaedic Association. Pubs The Royal College of Surgeons of England 2000.
2. Ganz SB, Wilson PD, Cioppa-Mosca J, Peterson MGE, The day of discharge after total hip arthroplasty and the achievement of rehabilitation functional milestones; 11 year trends. J Arthroplasty 18: 453-457, 2003.