

Use of an Orthopedic Table for Total Hip Replacement Conducted with the Direct Anterior Approach

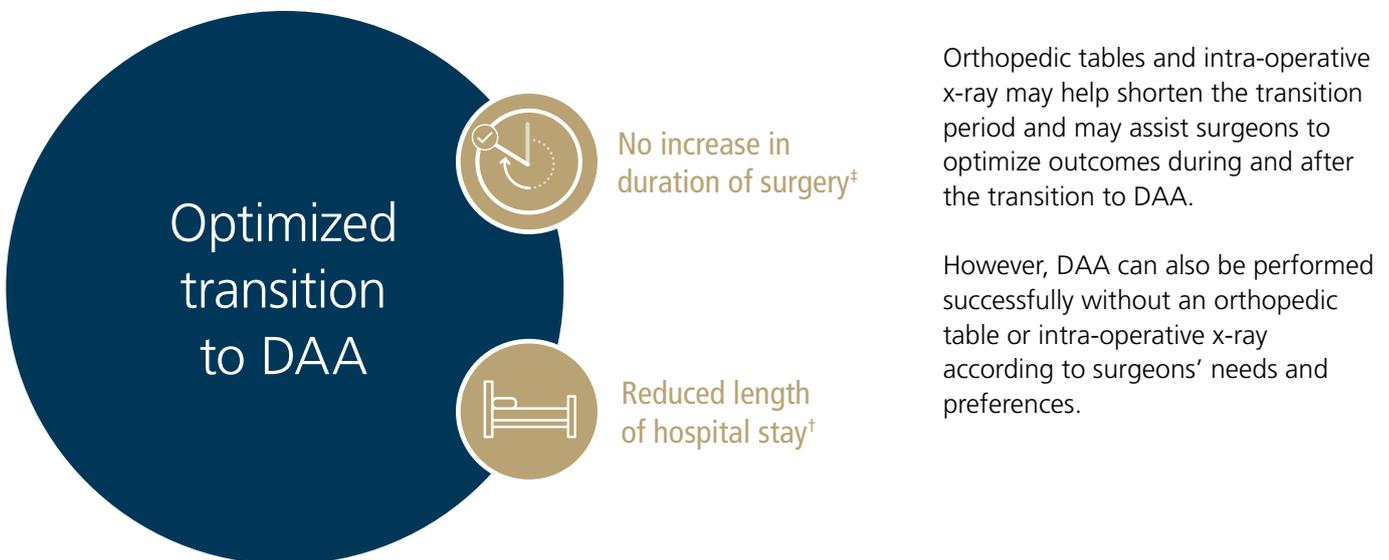
Direct Anterior Approach (DAA) is a minimally invasive technique used for total hip replacement (THR), which limits damage to the surrounding tissue. DAA can be performed with or without an orthopedic table and/or intra-operative x-ray according to surgeons' needs and preferences.

Methodology and Approach

The review was performed following standard methodology according to the PRISMA guidelines. Embase, MEDLINE and the Cochrane Library were searched on the 11th April 2014, without applying a date limit. In addition the reference lists of included studies, clinical trial registries, recent (2011 – 2014) topical conference proceeding, and topical orthopedic registries were searched manually. The initial search identified 1,552 publications. The full text of 170 publications was screened, resulting in 92 included publications (53 full publications and 39 abstracts), reporting clinical effectiveness, safety and patient reported outcomes of using the DAA for THR, including publications comparing DAA with other approaches to THR.

A more recent published systematic review¹ identified two further publications of interest, which were also included. In total, 28 publications reported the use of an orthopedic table.

Orthopedic table and intra-operative x-ray to support the transition to DAA



¹Length of stay and duration of surgery decrease with surgeon experience of DAA²
[‡]Normal duration of surgery for THR is 60-90 minutes based on a document published by the UK NHS³
[†]Normal length of stay for THR is 3-5 days based on a document published by NIAMS⁴

Support for Surgeons Through the Transition to DAA:



DePuy Synthes Companies support surgeons in education and training for THR, using the DAA and the CORAIL® PINNACLE® construct, with or without an orthopedic table and intra-operative x-ray.

DePuy Synthes' educational program takes into account individual needs and preferences.

DePuy Synthes can aid surgeons and hospitals in the procurement of orthopedic tables and C-arms for intra-operative x-ray.

The use of an orthopedic table may help to optimize inpatient and long-term outcomes in patients undergoing THR using DAA.

LENGTH OF HOSPITAL STAY



Mean length of stay is significantly lower in patients who undergo THR using DAA with an orthopedic table and intra-operative x-ray (2.28 days) vs the posterolateral approach (3.02 days) ($p=0.0374$)⁵

Length of hospital stay is low or normal[†] in patients who undergo DAA with an orthopedic table (Hana[®], Judet[®], or ProFX[®]), with reported median lengths of stay of 2–3 days, and reported mean lengths of stay of 3.0–3.2 days for unilateral THR and 4–5 days for bilateral THR⁵⁻¹⁰

[†] A normal range for length of stay was considered to be 3-5 days based on a document published by NIAMS⁴

DURATION OF SURGERY



Duration of surgery is generally within a normal range[‡] in patients undergoing THR using DAA with an orthopedic table (Hana, Rotex[®], ProFX, or Judet),^{5-9,12,13} with theatre times as low as 53 minutes reported (Hana table)¹¹

[‡] A normal range for duration of surgery was considered to be 60–90 minutes based on a document published by the UK NHS³

REVISION RATES



In the short term, low revision rates have been reported in patients who undergo THR using DAA with an orthopedic table (Judet, ProFX, or OSI Profix[®])^{7,10}

NHS: National Health Service. **NIAMS:** National Institute of Arthritis and Musculoskeletal and Skin Diseases.

REFERENCES

1. Higgins et al. J Arthroplasty. 2015 **2.** Zawadsky et al. J Arthroplasty. 2014 Jun;29(6):1256-60. **3.** NHS Choices. Available at: <http://www.nhs.uk/Conditions/Hip-replacement/Pages/Introduction.aspx> [Last accessed 21/08/15]. **4.** National Institute of Arthritis and Musculoskeletal and Skin Disease. Available at: http://www.niams.nih.gov/Health_Info/Hip_Replacement/ [Last accessed 21/08/15]. **5.** Barrett et al. J Arthroplasty. 2013 Oct;28(9):1634-8. **6.** Brown et al. Seminars in Arthroplasty. 2008;19(2):209-14. **7.** Mast et al. Orthop Clin North Am. 2009 Jul;40(3):351-6. **8.** Matta et al. Clin Orthop Relat Res. 2005 Dec;441:115-24. **9.** Matta et al. Orthopedics. 2005 Sep;28(9):927-8. **10.** Woolson et al. J Arthroplasty. 2009 Oct;24(7):999-1005. **11.** Bal et al. Indian J Orthop. 2008 Jul;42(3):301-8. **12.** Gebel et al. SICOT 25th Triennial World Conference, Prague, September 2011. **13.** Gebel et al. Orthop Rev (Pavia). 2012 Jan 2;4(1):e3.