Instrumentation or Non-instrumentation in Spinal Surgery
Presentation at the Ghana College of Physicians and Surgeons
The Lord Alton's 2 day course for Surgeons
27th – 28th October, 2016 Lectures, October 2016

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In the developing world, injuries, infectious diseases such as tuberculosis remain the major causes of spinal deformity and morbidity. With increasing life expectancy, and urbanisation, degenerative diseases of the spine are becoming increasingly prevalent. In the developed world, symptomatic spinal degeneration, with its associated disabilities and work restrictions have reached epidemic proportions, and the cost of treating these conditions has spiralled out of control.
In my recent visits to Ghana as a representative of World Orthopaedic Concern UK (WOC), and working and teaching with MOTEC-Life UK, I have seen evidence that degenerative conditions are becoming an increasing factor in the local health economy, and I have been involved in treating a significant number of cases. In the UK, we are aware that the outcomes of surgery are unpredictable, and that the introduction of increasing levels of sophistication, with investigation and surgical instrumentation, has produced disappointing results, unacceptable complications, and unrealistic costs.

The Spine Patient Outcome Research Trials (SPORT) has prospectively investigated the efficacy of surgical treatment for 3 common spinal conditions: - disc hernia, spinal stenos is, and degenerative spondylolisthesis. There appears to be support for the superiority of surgical versus conservative treatment in these conditions. A synopsis of the papers relevant to the latter two conditions is reproduced below

1. **Surgical versus Non-Operative Treatment for Lumbar Spinal Stenosis. Four-Year Results of the Spine Patient Outcomes Research Trial (SPORT)** By James N. Weinstein, DO, MS, Tor D. Tosteson, ScD, Jon D. Lurie, MD, MS, Anna Tosteson, ScD, Emily Blood, MS, Harry Herkowitz, MD Frank Cammisa, MD, Todd Albert, MD, Scott D. Boden, MD, Alan Hilibrand, MD, Harley Goldberg, MD, Sigurd Berven MD, and Howard An, MD

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2. **Surgical Compared with Non-operative Treatment for Lumbar Degenerative Spondylolisthesis Four-Year Results in the Spine Patient Outcomes Research Trial (SPORT) Randomized and Observational Cohorts** By James N. Weinstein, DO, MS, Jon D. Lurie, MD, MS, Tor D. Tosteson, ScD, Wenyan Zhao, MS, Emily A. Blood, MS, Anna N.A. Tosteson, ScD, Nancy Birkmeyer, PhD, Harry Herkowitz, MD, Michael Longley, MD, Lawrence Lenke, MD, Sanford Emery, MD, and Serena S. Hu, MD

These studies are relevant to patients in Ghana, who are likely to suffer life-long symptoms, in the absence of any availability of surgical treatment. The priority of surgical treatment is to secure adequate decompression of the spinal canal, without compromising stability. When possible, this should be achieved without instrumentation, but this will not always be realistic, and I will discuss the indications for instrumentation in specific cases.

I will also discuss the more general issues involved in the assessment of patients with mechanical back disorders. It is desirable not to over medicalise the condition, whilst introducing realistic indications for imaging in those who either need to exclude a diagnosis of serious pathology, or access treatment for neurogenic pain.