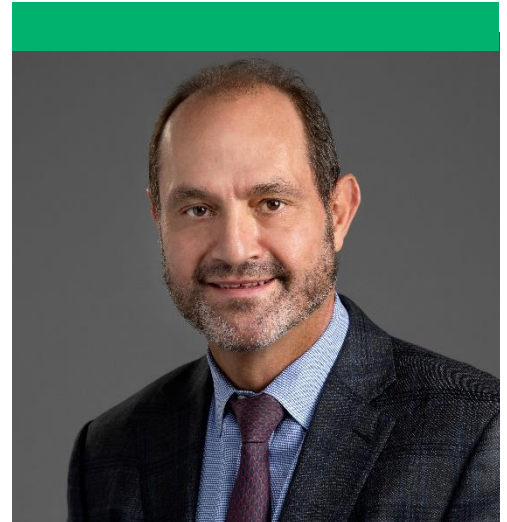




## Frank M. Phillips, MD

The Ronald L. DeWald, MD, Professor of  
Spinal Deformities



### Advancement of Medicine

In 2024, we advanced our work to ensure that Rush remains a national leader in spine surgery, especially in minimally invasive spinal deformity surgery. The procedures and techniques we have pioneered and studied, have become widely adopted in spinal surgery and incorporated into deformity surgeries.

We have also pioneered the use of augmented reality in spinal surgery to streamline and enhance the safety of spinal procedures. These techniques are used for deformity correction surgery as well as degenerative conditions. We remain at the international forefront of cervical disc replacement. We have performed translational research studies looking at the gut microbiome and how it might affect low back pain and disc degeneration. I have published and lectured extensively in these areas nationally and internationally.

In 2024, **Nathan Lee, MD**, a fellowship-trained spinal deformity specialist began his practice at Rush. Dr. Lee performed his residency and fellowship under the tutelage of **Larry Lenke, MD**, a world-renowned spinal deformity surgeon who completed his fellowship under **Ron DeWald, MD**.

### Research

Funds from the endowment have helped cover the costs of our research efforts and support staff, publications, and meeting participation.

### Grants

The endowed fund has supported our research team, including basic scientists and clinicians' activities, resulting in numerous manuscripts and presentations at national and international meetings. In addition, the fund supports our involvement in multi-center FDA investigational device



exemption studies. The basic science research studies supported by your generosity have been productive, leading to federal funding of additional projects.

### Selected Presentations

- Federico VP, Nie JW, Sachdev D, Hartman TJ, Gabriel S, Butler AJ, Trevino N, Lopez GD, An HS, Colman MW, **Phillips FM**. Medicare Procedural Costs in Ambulatory Surgery Centers vs Hospital Outpatient Departments for Spine Surgeries. Poster Presentation at the American Academy of Orthopaedic Surgeons Annual Meeting. February 12-16, 2024; San Francisco, CA
- Federico VP, Nie JW, Butler AJ, Sachdev D, Trevino N, Federico QP, Lopez GD, An HS, Colman MW, **Phillips FM**. Trends in Volume and Utilization of Spine Surgeries from 2013 to 2021. Poster Presentation at the American Academy of Orthopaedic Surgeons Annual Meeting. February 12-16, 2024; San Francisco, CA
- **Phillips FM**, Coric D, Lanman TH, Lavelle WF, Milam RA, Pratt, SR. Seven-Year outcomes for single-level total disc replacement with a novel viscoelastic artificial cervical disc. ePoster Presentation at the American Academy of Orthopaedic Surgeons Annual Meeting. February 12-16, 2024; San Francisco, CA
- **Phillips FM**, Segebarth PB, Laxer EB, Cannestra AF, Thomas AJ, Than KD, Meyer C. Effect of autologous vs allogenic cell-based grafts on early clinical and radiographic outcomes in LLIF surgery. 39<sup>th</sup> NASS Annual Meeting. Chicago October 2024

### Publication Highlights — Abbreviated

- Federico VP, Zavras AG, Vucicevic RS, Salazar LM, An HS, Colman MW, **Phillips FM**. Delayed Infection After Cervical Disc Arthroplasty: A Case Report and Review of the Literature. *Clinical Spine Surgery*. 37(10):472-476,2024.
- Federico VP, Nie JW, Sachdev D, Hartman TJ, Trevino N, Gabriel S, Butler AJ, Lopez GD, An HS, Colman MW, **Phillips FM**. Medicare procedural costs in ambulatory surgery centers versus hospital outpatient departments for spine surgeries. *J Neurosurg Spine*. 40(1):115-120.2024



- Spece H, Khachatryan A, **Phillips FM**, Lanman TH, Andersson GBJ, Garrigues GE, Bae H, Jacobs JJ, Kurtz SM. Presentation and management of infection in total disc replacement: A review. N Am Spine Soc J. Vol.18. 2024
- Zavras AG, Federico VP, Butler AJ, Nolte MT, Dandu N, **Phillips FM**, Colman MW. Relative Efficacy of Cervical Total Disc Arthroplasty Devices and Anterior Cervical Discectomy and Fusion for Cervical Pathology: A Network Meta-Analysis. Global Spine J. (1):322-346. 2024.
- Patwardhan AG, Havey RM, **Phillips FM**, Zigler JE, Coric D, Guyer R, Lanman T, Muriuki MG. Prosthesis design and likelihood of achieving physiological range of motion after cervical disc arthroplasty: analysis of range of motion data from 1,173 patients from 7 IDE clinical trials. Spine J 24(6):969-978 2024
- Shahzad H, Ibrahim M, Le H, JavidanY, **Phillips F**, Khan SN. Assessing Medicare Advantage trends in lumbar spine surgery: Balancing financial appeal vs patient outcomes. Journal of Orthopaedic Reports 2024

## The Year Ahead: 2025 and Beyond

We will continue to provide support for research activities on spinal procedures and spinal deformity, with emphasis on improving outcomes and reducing complications through less invasive approaches as well as further studying the value of enabling technologies including augmented reality and robotic guidance.

Dr. Lee has started to develop a spinal deformity practice that is rapidly growing. The endowment funds will assist him in developing a robust spinal deformity research program.

## With Gratitude

I want to sincerely thank Dr. DeWald for the support provided by the endowed professorship of spinal deformities. This generosity has helped our section continue your proud legacy in advancing the field of spine surgery and providing better outcomes for our patients. Your support allows us to remain one of the most highly regarded spine programs in the nation.