Danny P. Goel MD, MSc, FRCS(C), MBA Diplomate of the American Board of Orthopedic Surgery

Clinical Professor Faculty of Medicine University of British Columbia Department of Orthopedic Surgery Division of Arthroscopic, Reconstructive Surgery and Joint Preservation

CEO– Founder of PrecisionOS

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10/2018-05/2020	MBA Rotman School of Management, University of Toronto.
3/2015–3/2015	Visiting Shoulder Observership: Mayo Hand/ Shoulder -Elbow Service, Division of Orthopedic Surgery, Mayo Clinic, Rochester, MN
8/2013-8/2013	Visiting Shoulder Observership: Department of Orthopedic Surgery, Centre Santy, Lyon, France and Department of Orthopedic Surgery and Sports Traumatology, Hopital de L'Archet, University of Nice, Nice, France
1/2012-1/2012	Visiting Shoulder Observership: Mayo Hand/ Shoulder-Elbow Service, Division of Orthopedic Surgery, Mayo Clinic, Rochester, MN
8/2009-7/2010	Clinical Fellow, Shoulder Fellowship. Harvard Shoulder Service, Division of Orthopedic Surgery, Massachusetts General Hospital and Brigham Women's Hospital, Harvard Medical School, Boston, MA
5/2010-6/2010	Visiting Shoulder Fellow: Mayo Shoulder / Elbow Service. Division of Orthopedic Surgery. Mayo Clinic, Rochester, MN.
7/2008-6/2009	Clinical Fellow, Shoulder Fellowship, Division of Orthopaedic Surgery, Hand and Upper Limb Center and Fowler Kennedy Sports Medicine Center, University of Western Ontario, London, Ontario
7/2007-6/2008	Chief Resident, Division of Orthopaedic Surgery, Department of Surgery, University of Calgary, Calgary, Alberta
7/2003-7/2008	Resident, Division of Orthopaedic Surgery, Department of Surgery, University of Calgary. Calgary, Alberta
8/1999-5/2003	Doctor of Medicine, University of Manitoba, Faculty of Medicine Winnipeg, Manitoba
9/1998-10/2001	Master of Science, University of Manitoba, Faculty of Medicine, Department of Physiology, Winnipeg, Manitoba
8/1997-5/1997	Pre-Masters, University of Manitoba, Faculty of Medicine, Department of Physiology, Winnipeg, Manitoba
9/1993-5/1997	Bachelor of Science, University of Manitoba, Faculty of Medicine Winnipeg, Manitoba

9/1991-6/1993 Grade 12 Diploma, University of Winnipeg Collegiate, Winnipeg, Manitoba

Examinations

8/2015 – present	Board-Certified Diplomat American Board of Orthopedic Surgery
8/2009- present	Board-Eligible, American Board of Orthopedic Surgery Step I
8/2008 -present	Fellow of the Royal College of Physicians and Surgeons of Canada
7/2003-6/2005	Licensure of Medical Council of Canada
10/2003 -2/2009	USMLE Parts I, II and III

Distinctions and Awards

2021	CSCI/CIHR Resident Research Manuscript Competition UBC Department of Orthopaedics -Nomination
2021	ASES and British Shoulder and Elbow Society (BESS) Top 10 Abstract- Skill training and transfer with virtual reality.
2021	Royal College of Physicians and Surgeons of Canada Simulation Summit top presentation award
2020	Inaugural Canadian Orthopaedic Association (COA) and Canadian Shoulder and Elbow Society (CSES) Research Grant – Virtual reality training
2020	National Training and Simulation Association (NTSA) I/ITSEC 2020 Runner-Up BestPaper – Virtual Reality Training
2019	OSET Orthopaedic Summit 2019 Travel Award – Virtual Reality and Skill Transfer
2019	UBC Department of Orthopaedics Research Day and BC Orthopaedic Association 1 st place best research presentation award – Virtual Reality and Skill Transfer
2019	UBC Resident Research Award for Best Paper: Randomized Controlled Trial comparing Virtual reality training to non-virtual reality training
2017	UBC Resident Research Award for Best Paper: Real and Perceived Glenoid Anchor Placement: A Cadaveric Study of the Beach and Lateral Positions. Resident (Dr. Ben Jong), Principal Investigator (Dr. Danny P. Goel)
2016	Canadian French Belgian Swiss (CFBS) Traveling Fellowship (Canadian Orthopedic Association)
2/2012-present	Fraser Health Authority Research Salary Award

2011	AAOS Multimedia Award Winning Educational Video: Scapulothoracic Fusion: Indications, Technique and Outcome. San Diego, CA
7/2007-7/2008	Laura May Gardner Award for Best Clinical Paper (2 nd Place). Surgeons' Day, Calgary, Alberta
7/2006-7/2007	Laura May Gardner Award for Best Clinical Paper (2 nd Place). Surgeons' Day, Calgary, Alberta
7/2006-7/2007	MEDEC Award for Clinical Research, Canadian Orthopedic Residents Association Meeting, Halifax, Nova Scotia.
7/2006-7/2007	Zimmer/Linvatec Alberta Orthopedic Resident Research Day Award for Best Clinical Research Paper.
7/2006-7/2007	Canadian Orthopaedic Research Education Fund (COREF) Research Grant
7/2002-7/2003	Heart and Stroke Foundation of Manitoba Award For Excellence in Cardiovascular Research Manitoba Medical Services Award for Excellence in Masters Research
7/2001-7/2002	Harry Percival Scholastic Award The Estate of George Keates Research Fund
7/2000-7/2001	Finalist, National Student Research Forum (Galveston, TX)
9/1999-5/2000	University of Manitoba Travel Award University of Manitoba Graduate Fellowship
9/1995-5/1996	Dean's Honour List, University of Manitoba
9/1991-5/1993	Student of Distinction, University of Winnipeg Collegiate

Academic Appointments / Professional Membership

07/2022- present	Member of Metaverse Standards Forum
05/2021-present	Clinical Professor -UBC Department of Orthopedic Surgery
05/2018-2020	Continuing Professional Development Committee- COA
05/2018 – 2020	Faculty Advisory Committee: UBC Department of Orthopedic Surgery
01/2018 – 2021	AO member
09/2017 – present	Committee member of the VRAR Association Health Care Division
10/2016 – present	Associate Member – ASES (American Shoulder and Elbow Society)
5/2016 – present	Examiner: Royal College of Physicians and Surgeons of Canada

5/2015 – present	Residency Training Committee UBC Department of Orthopedic Surgery
6/2014 – present	Member Codman Shoulder Society
02/2014 – present	Resident Selections Committee (Interview Panel): UBC Department of Orthopedic Surgery
6/2014 – 5/2017	Canadian Orthopedic Association - Membership Committee
3/2017 – present	American Journal of Sports Medicine (AJSM) Scientific Manuscript Reviewer
8/2013 – present	Journal of Shoulder and Elbow Surgery (JSES) Scientific Manuscript Reviewer
8/2013 – present	Journal of Bone and Joint Surgery- American (JBJS-Am) Scientific Manuscript Reviewer
12/2012- present	Member of Canadian Shoulder and Elbow Society (CSES)
12/2012 – present	Member, BC Shoulder and Elbow Society
12/2012 – present	Member, BC Orthopedic Association
8/2010 – 2021	Clinical Associate Professor, Faculty of Medicine, UBC Department of Orthopedic Surgery. Division of Arthroscopic, Reconstructive Surgery and Joint Preservation. Burnaby General Hospital, Burnaby, BC
8/2010 – present	Member of the British Columbia Medical Association
0/2010 - present	
7/2003- present	Member of the American Academy of Orthopedic Surgeons
7/2003- present	Member of the American Academy of Orthopedic Surgeons Clinical Fellow, Shoulder Fellowship. Harvard Shoulder Service, Division of Orthopedic Surgery, Massachusetts General Hospital and Brigham
7/2003- present 8/2009-7/2010	Member of the American Academy of Orthopedic Surgeons Clinical Fellow, Shoulder Fellowship. Harvard Shoulder Service, Division of Orthopedic Surgery, Massachusetts General Hospital and Brigham Women's Hospital, Harvard Medical School, Boston, MA Clinical Fellow, Shoulder Fellowship. Western University, Hand and Upper Limb Center / Fowler Kennedy Sports Medicine Center. London,
7/2003- present 8/2009-7/2010 7/2008-6/2009	Member of the American Academy of Orthopedic Surgeons Clinical Fellow, Shoulder Fellowship. Harvard Shoulder Service, Division of Orthopedic Surgery, Massachusetts General Hospital and Brigham Women's Hospital, Harvard Medical School, Boston, MA Clinical Fellow, Shoulder Fellowship. Western University, Hand and Upper Limb Center / Fowler Kennedy Sports Medicine Center. London, Ontario AO Lecturer and Table Instructor. AO North America Operating Room
7/2003- present 8/2009-7/2010 7/2008-6/2009 7/2007-7/2008	Member of the American Academy of Orthopedic Surgeons Clinical Fellow, Shoulder Fellowship. Harvard Shoulder Service, Division of Orthopedic Surgery, Massachusetts General Hospital and Brigham Women's Hospital, Harvard Medical School, Boston, MA Clinical Fellow, Shoulder Fellowship. Western University, Hand and Upper Limb Center / Fowler Kennedy Sports Medicine Center. London, Ontario AO Lecturer and Table Instructor. AO North America Operating Room Personnel Course, Principles and Advanced. Calgary, Alberta Canada
7/2003- present 8/2009-7/2010 7/2008-6/2009 7/2007-7/2008 7/2007-6/2008	 Member of the American Academy of Orthopedic Surgeons Clinical Fellow, Shoulder Fellowship. Harvard Shoulder Service, Division of Orthopedic Surgery, Massachusetts General Hospital and Brigham Women's Hospital, Harvard Medical School, Boston, MA Clinical Fellow, Shoulder Fellowship. Western University, Hand and Upper Limb Center / Fowler Kennedy Sports Medicine Center. London, Ontario AO Lecturer and Table Instructor. AO North America Operating Room Personnel Course, Principles and Advanced. Calgary, Alberta Canada Chief Resident, Division of Orthopaedic Surgery, Calgary, Alberta

8/2001-5/2002	Radiology Curriculum Evaluation Class Representative, Medical Class 2003, University of Manitoba, Faculty of Medicine, Winnipeg, Manitoba
9/2000-5/2001	Musculoskeletal Block Curriculum Evaluation Class Representative, Medical Class 2003, University of Manitoba, Faculty of Medicine, Winnipeg, Manitoba
9/1999-5/2000	Cardiovascular Block Curriculum Evaluation Class Representative, Medical Class 2003, University of Manitoba, Faculty of Medicine, Winnipeg, Manitoba
10/1998-3/1999	CPR and First Aid Instructor
9/1997-5/1998	Chemistry and Physics Lab Demonstrator, University of Winnipeg Collegiate, Winnipeg, Manitoba
	Biology Seminar Instructor and Tutor, University of Manitoba, Faculty of Science, Winnipeg, Manitoba

Orthopedic Surgery Conferences

- 1. AAOS: Chicago, IL 2022
- 2. AAOS: San Diego, CA 2021
- 3. ASES: New York, NY 2019
- 4. I/ITSEC: Orlando, FL 2019
- 5. COA: Victoria, BC 2018
- 6. **ASES:AAOS**: New Orleans, LA 2018
- 7. UBC Orthopedic Update: Vancouver, BC 2018
- 8. UBC Orthopedic Update: Vancouver, BC 2017
- 9. ASES: AAOS: San Diego, CA 2017
- 10. Orthopedics Today: Maui, HI 2017
- 11. ASES Open Meeting: Boston, MA 2016
- 12. ASES:AAOS: Orlando, FL 2016
- 13. ASES: AAOS: Las Vegas, NV 2015
- 14. Canadian Orthopedic Association: Vancouver, BC 2015

- 15. Orthopedics Today: Kauai, HI 2015
- 16. San Diego Shoulder Meeting: San Diego, CA 2014
- 17. Orthopedics Today: Maui, HI 2014
- 18. ASES Open Meeting: Las Vegas, NV 2013
- 19. ASES -American Academy of Orthopedic Surgeons (AAOS) : Chicago, IL 2013
- 20. UBC Orthopedic Update: Vancouver, BC 2013
- 21. Orthopedics Today: Kona, HI 2013
- 22. Canadian Orthopedic Association: Ottawa, ON 2012
- 23. UBC Orthopedic Update: Vancouver, BC 2012
- 24. ASES: AAOS /: San Francisco, CA 2012
- 25. AAOS /OTA Tactics in Extremity Trauma: Rosemont, IL 2011
- 26. Advanced Shoulder Arthroscopy: San Antonio, TX 2011
- 27. Masters Shoulder Arthroplasty Course: Vancouver 2011
- 28. San Diego Shoulder Meeting: San Diego, CA 2011
- 29. UBC Orthopedic Update: Vancouver 2011
- 30. Canadian Orthopedic Association: St. John's, NF 2011
- 31. Accumed Upper Extremity Trauma Course: Las Vegas, NV 2011
- 32. Canadian Orthopedic Association: Edmonton, AB 2010
- 33. New England Shoulder / Elbow Society: Jay Peak, VT 2010
- 34. Boston Shoulder Symposium: Weston, MA 2009
- 35. ASES (Open Meeting): New York, NY 2009
- 36. Canadian Orthopedic Association: Whistler, BC 2009.
- 37. ASES: AAOS/ Las Vegas, NV 2009
- 38. American Academy of Orthopedic Surgeons/ASES: San Francisco, CA 2008
- 39. Canadian Orthopedic Association: Quebec City, QC 2008
- 40. Canadian Orthopedic Residents Association and Canadian Orthopedic Association: Halifax, Nova Scotia 2007
- 41. AO-Advanced Fracture Course: Sun Valley, Idaho 2007

- 42. Canadian Orthopaedic Residents Association Annual Meeting: Toronto, Ontario 2006
- 22. AO- Basic Fracture Course: Sun Valley, Idaho 2005
- 23. Canadian Orthopedic Association: Calgary, Alberta 2004
- 24. **Fifth Biennial Foot and Ankle Symposium:** University of Toronto, Department of Orthopedic Surgery. Toronto, Ontario April 2002
- 25. **Orthopedic Odyssey 2001:** University of Manitoba, Department of Orthopedic Surgery. Winnipeg, Manitoba October 2001

Immersive Medical Education Presentations

1. Failure based learning in Virtual Reality

IVRHA Penn Medicine Philadelphia, 2023

2. Virtual Reality 2.0

AAOS Orthodome Las Vegas, 2023

3. Data Driven Virtual Reality Platform

vMED Los Angeles, CA Los Angeles, 2023

4. Virtual Reality: Disruption of Education and Pre-surgical planning

UBC update UBC Department of Orthopedic Surgery Vancouver, BC 2019

5. Virtual Reality: A Paradigm Shift in Surgical Education

Grand Rounds UBC Department of Orthopedic Surgery Vancouver, BC 2018

6. The Future of Surgery is Virtual

Invited Faculty Canadian Orthopedic Resident Association Victoria, BC 2018

7. Virtual Reality in Healthcare: A Panel Discussion and Presentation

Invited Guest Speaker Interface Summit Vancouver, BC 2018

8. Precision OS: A Focus on Immersive Medical Education

Invited Guest Speaker VANTech Angel Investor Vancouver, BC 2019

9. Biceps Management Strategy

Faculty Conmed/ Linvatec Vancouver, BC 2018

10. Shoulder Instability

Faculty Conmed/ Linvatec Vancouver, BC 2018

11. Management of Massive Rotator Cuff Tears - Non -Arthroplasty Options

Faculty Conmed / Linvatec Vancouver, BC 2018

12. Management of Massive Rotator Cuff Tears – Non -Arthroplasty Options

Faculty CSES Calgary, AB 2017

13. Biceps Management Strategy

Faculty Conmed/ Linvatec Toronto, ON 2017

14. Shoulder Instability

Faculty Conmed/ Linvatec Vancouver, BC 2017

15. Superior Capsular Reconstruction: Non-Arthroplasty Reversal of Pseudoparalysis

Faculty Arthrex Vancouver, BC 2017

16. Approach to Total Shoulder Arthroplasty

Faculty Wright Medical / Tornier Vancouver, BC 2017

17. Superior Capsular Reconstruction: Non-Arthroplasty Reversal of Pseudoparalysis

Guest Lecturer Hopital Orthopedique Lausanne, Switzerland 2016

18. Superior Capsular Reconstruction: Non-Arthroplasty Reversal of Pseudoparalysis

Guest Lecturer HFR Fribourg – Cantonal Hospital Fribourg, Switzerland 2016

19. Superior Capsular Reconstruction: Non-Arthroplasty Reversal of Pseudoparalysis and Questioning the Dogma on Tendon Transfers for Rotator Cuff Deficiency

Guest Lecturer Hopital Universitaire Geneve Geneva, Switzerland 2016

20. Superior Capsular Reconstruction: Non-Arthroplasty Reversal of Pseudoparalysis

Guest Lecturer Sart-Tilman CHU de Liege Liege, Belgium 2016

21. Superior Capsular Reconstruction: Non-Arthroplasty Reversal of Pseudoparalysis

Guest Lecturer Cliniques Unversitaires St Luc UCL Brussels, Belgium 2016

22. Latarjet: Science and Surgeons Provide the Evidence

Guest Lecturer Hopital Erasme Erasme, Belgium 2016

23. Superior Capsular Reconstruction: Non-Arthroplasty Reversal of Pseudoparalysis

Guest Lecturer Ambroise Pare University Hospital Paris, France 2016

24. The Quality of Shoulder Referrals and Cost Effectiveness of Surgeon Driven Ultrasound in British Columbia

UBC Department of Orthopedic Surgery Grand Rounds Vancouver, BC October 2016

25. Total Shoulder Arthroplasty Basic Science Considerations

Wright Medical (Faculty) Vancouver, BC September 2016

26. Total Shoulder Arthroplasty- Exposure Tips and Tricks

Wright Medical (Faculty) Vancouver, BC September 2016

27. Superior Capsular Reconstruction

Arthrex Shoulder Think Tank Vancouver, BC October 2016

28. Current Concepts in Biceps Management

Linvatec Faculty/Lab Instructor Toronto, ON September 2016

29. Biceps Tendon Management Options

Arthrex Roadshow Faculty/Lab Instructor Vancouver, BC July 2016

30. Glenohumeral Instability: Treatment for Bone Loss

Arthrex Roadshow Faculty/Lab Instructor Vancouver, BC July 2016

31. Superior Capsular Reconstruction: Indications and Early Outcomes

Arthrex Roadshow Faculty/Lab Instructor Vancouver, BC July 2016

32. Rotator Cuff Injuries, Evaluation and Management:

CME on the Run: 2016 Vancouver Family Physicians Group Vancouver, BC

33. Total Shoulder Arthroplasty: Basic Science Considerations

Canadian Shoulder and Elbow Society (CSES) Shoulder Course for PGY-5 Residents and Shoulder/Sports Fellows (Faculty/ Lab Instructor) Ottawa, ON 2016

34. A Perspective on Why Latarjet is the Answer? Why Science and the Surgeon Provide the Evidence.

Conmed-Linvatec Meeting Clearwater, FL 2015

35. Primary bone reconstruction for recurrent shoulder instability.

Canadian Orthopedic Association Symposium: Shoulder Instability Vancouver, BC 2015

36. Shoulder Instability: How to ensure the best outcome

CSES Shoulder Course for PGY-5 Residents and Shoulder/Sports Fellows (Faculty/ Lab Instructor) Ottawa, ON 2015

37. Shoulder Instability

Conmed-Linvatec Meeting Clearwater, FL 2014

38. Shoulder Instability: How to ensure the best outcome

CSES Shoulder Course for PGY-5 Residents and Shoulder/Sports Fellows (Faculty/ Lab Instructor) Ottawa, ON 2014

39. Shoulder Tendon Transfers

UBC Orthopedic Update for Department of Orthopedic Surgery. Lecturing Faculty Vancouver, BC 2013

40. Tendon Transfers About the Shoulder: Indications and Outcomes

UBC Department of Orthopedic Surgery Grand Rounds Vancouver, BC 2012

41. Shoulder Tendon Transfers for Adult Brachial Plexus Injuries

UBC Department of Medical Rehabilitation Grand Rounds, GF Strong Rehabilitation Center, Vancouver, BC 2012

42. Evaluation of the Shoulder: Diagnostic and Therapeutic Approach

Burnaby Family Physicians Organization Burnaby, BC 2012

43. Complications Following the Latarjet Procedure.

Canadian Orthopedic Association, Ottawa, ON 2012

44. Infection Rates in Total Shoulder Arthroplasty: Best Practice- Antibiotic Cement.

Canadian Orthopedic Association, Ottawa, ON 2012

45. Reverse Total Shoulder Arthroplasty in the Rheumatoid Patient

Canadian Orthopedic Association, Ottawa, ON 2012

46. Coracoid Graft Union Following the Latarjet Procedure

Canadian Orthopedic Association, Ottawa, ON 2012

47. Infection Rates in Total Shoulder Arthroplasty: Best Practice- Antibiotic Cement.

ASES/AAOS, San Francisco, CA 2012

48. Complex Upper Extremity Disorders

UBC Orthopedic Update, Vancouver, BC 2012

49. Anatomical Variations in Cuff Tear Arthropathy.

Canadian Orthopedic Association, St. John's, Newfoundland 2011

50. Estimation of Humeral Head Version Using the Medial Calcar: A CT Based Analytical Study.

Canadian Orthopedic Association, Edmonton, Alberta June 2010.

51. Prospective Clinical Outcome of the Delta III Prosthesis for Painful Pseudoparalysis of the Shoulder: The Initial Canadian Experience.

Canadian Orthopedic Association, Edmonton, Alberta June 2010.

52. Clavicle Fractures.

Canadian Society of Orthopedic Technologists, University of Calgary, February 2008.

53. Rotator Cuff Disease.

Grand Rounds. Department of Rehabilitation, University of Calgary. May 2007.

54. Achilles Tendon Surgery: Cost Analysis of Study and Elective Patients.

Canadian Association of Sports Medicine, Quebec City, Quebec (March 2007) Alberta Orthopaedic Surgery Residents Conference (April 2007) Calgary Surgeons' Research Day (June 2007) Canadian Orthopaedic Association, Halifax, Nova Scotia(June 2007)

55. DVT Prophylaxis in Lower Extremity Fractures. A Prospective Randomized Controlled Trial.

Alberta Orthopaedic Surgery Residents Conference (April 2007) Calgary Surgeons' Research Day (June 2007) Canadian Orthopaedic Residents Association Halifax, Nova Scotia (June 2007) Canadian Orthopaedic Association Halifax, Nova Scotia (June 2007) Orthopaedic Trauma Association, Boston, MA (October 2007)

56. Multidirectional Shoulder Instability in Patients with Ehlers Danlos Syndrome,

Orthopaedic Surgery Teaching Rounds, University of Manitoba Faculty of Medicine, Winnipeg, Manitoba (April 2002)

57. Meningitis,

Pediatric Service Rounds, University of Manitoba Faculty of Medicine, Winnipeg, Manitoba (June 2002)

58. The Effects of Polyunsaturated Fatty Acids on the Cardiac Sarcolemmal Sodium-Hydrogen Exchanger.

National Student Research Forum, University of Texas Medical Branch, Galveston, Texas (2001)

59. Doping Control Urinalysis of a Ginseng Extract, Cold-F/X, in Athletes.

National Sports and Nutrition Conference at the World Track and Field Championships, Edmonton, Alberta (2001)

60. Manipulation of Cardiac Sarcolemmal Phospholipids Has No Influence on Sodium-Hydrogen Exchange.

World Conference of the International Society for Heart Research, Winnipeg Convention Center, Winnipeg, Manitoba (2001)

61. Inhibited Sodium-Hydrogen Exchange in Diabetes Is Not Due To Phospholipid Alteration.

International Conference on Diabetes and Cardiovascular Disease, Winnipeg Convention Center, Winnipeg, MB (1999)

62. Altered Sodium-Hydrogen Exchange in Phospholipase D Treated Sarcolemmal Vesicles.

International Society for Heart Research, San Diego, California (1999)

63. The Effects of Phospholipase D on Cardiac Sarcolemmal Sodium-Hydrogen Exchange.

Alpine Student Research Forum, Banff, Alberta (1999)

Poster Presentations:

- Lohre, R., Bois, G., Athwal, G.S., Canadian Shoulder Elbow Society. and Goel, D.P. Validation of Immersive Virtual Reality in Senior Orthopedic Residents: A Prospective Blinded Randomized Controlled Trial (UBC Research Day – 2019 First Place)
- 2. **Goel, D.P.,** O'Connor, C and Oliveira, R. A Metrics Driven Virtual Reality Platform for the Current and Future Surgeons. (*ORS Business Plan Competition -AAOS 2018*)
- 3. Jong, B, Sasyniuk, T, Leiter, J., Macdonald, P.B., Regan, W.R. and **Goel, D.P.** Surgeon Perspective on Glenoid Anchor Placement During Bankart Repair: A Comparison of Beach Chair and Lateral Position- Principal Investigator. (*Las Vegas, Ortho Summit, 2017*)
- Frank, T., Tan, M, Chmelik, C., Regan, W.R. and Goel, D.P. The Economic Impact of Point of Contact Shoulder Ultrasound in the WorksafeBC Population: – Principal Investigator. (manuscript in preparation: Accepted as High Scoring Poster for COA Quebec City, QC 2016)
- 5. Jong, B, Sasyniuk, T, Leiter, J., Macdonald, P.B., Regan, W.R. and **Goel, D.P.** Surgeon Perspective on Glenoid Anchor Placement During Bankart Repair: A Comparison of Beach Chair and Lateral Position- Principal Investigator. (*COA Quebec City, QC 2016*)

Publications:

- 1. Mao RQ, Lan L, Kay J, Lohre R, Ayeni OR, **Goel D.P.**, et al. Immersive Virtual Reality for Surgical Training: A Systematic Review. J Surg Res. 2021;268:40–58.
- 2. Goh G, Lohre R, **Goel D.P**., Revolutionizing Orthopaedic Surgical Education with Immersive Virtual Reality. Journal of Orthopaedic Experience and Innovation. (in press)
- 3. Lohre R, **Goel D.P**., Immersive Virtual Reality Provides Value to Orthopaedic Surgical Training Programs. Health Management Policy and Innovation (HMPI). (in press)
- 4. Lohre R, Goh G, Parvizi J, **Goel D.P**., Virtual and Augmented Reality for Surgical Training and Simulation in Knee Arthroplasty. Archives of Orthopaedic and Trauma Surgery (AOTS), 2021. In press
- 5. Lohre R, **Goel D.P**., Immersive Virtual Reality in Endoscopic and Open Spine Surgical Training. Technical Advances in Minimally Invasive Spine Surgery, Navigation, Robotics and Augmented and Virtual Reality. Springer Nature. (in press)
- 6. Lohre R, **Goel D.P**,. Virtual Reality: The Future of Surgical Education in Orthopedics and Beyond. Paris International Shoulder Course. Paris, France. 14-16 February, 2019.
- 7. Lohre R, Bois A, Athwal GS, **Goel D.P.**, CSES. Immersive virtual reality demonstrates improved and efficient surgical skill acquisition in senior orthopedic residents: a prospective blinded randomized controlled trial. Can J Surg. 2019; 62(6 Suppl 1)
- Lohre R, Warner JJP, Morrey BR, Athwal GS, Morrey ME, Mazzocca AD, Goel D.P., Mitigating Surgical Skill Decay in Orthopaedics Using Virtual Simulation Learning. J Am Acad Orthop Surg Glob Res Rev. 2021 Oct 12;5(10). doi: 10.5435/JAAOSGlobal-D-21-00193. PMID: 34637404.

- Lohre R, Lobo A, Bois A, Pollock JW, Lapner P, Athwal GS, Goel D.P., Reliability of intra-operative, unassisted interpretation of augmented glenoid baseplate placement during reverse shoulder arthroplasty using computed tomography – based 3D models
- Lohre R, Bois A, Athwal GS, Lapner P, Pollock J, Goel DP. Effectiveness of Immersive Virtual Reality for Orthopaedic Surgical Skills and Knowledge Acquisition: A Randomized Controlled Trial. JAMA Network Open. 2020, 3(12):e2031217
- Lohre R., Bois A., Athwal G.S., Goel D.P. CSES. Improved Complex Skill Acquisition by Immersive Virtual Reality: A Randomized Controlled Trial. J Bone Joint Surg Am. 2020, 102(6):e26
- Lohre R., Athwal GS, Warner JP, Goel D.P. The Evolution of Virtual Reality in Shoulder and Elbow Surgery. 2020. Journal of Shoulder and Elbow Surgery International. 2020, 4(2): 215-223
- Lohre R., Wang JC, Lewandrowski, K, Goel D.P. Virtual Reality and Spinal Endoscopy: A Necessary Paradigm Shift in Education to Support Spine Surgeons. Journal of Spine Surgery. 2020, 6(1)
- 14. Lohre R, **Goel DP**. Immersive Virtual Reality: A Paradigm Shift in Education and Training. AAOS NOW. Cover article. January 2020
- Lohre R, Morrey B, Goel DP. Immersive Technologies Offer Short and Long-TermValue. AAOS NOW. May 2020
- 16. Lohre R., Bois A., Athwal G.S., **Goel D.P**. Improved Complex Skill Acquisition by Immersive Virtual Reality: A Randomized Controlled Trial. COA Bulletin 2020
- 17. Lohre R, **Goel DP.** How Immersive Virtual Reality is Changing Hip ArthroscopyEducation. FAIapp. 2020
- Lohre R, Goel DP. Immersive Virtual Reality in Endoscopic and Open Spine Surgical Training. Technical Advances in Minimally Invasive Spine Surgery, Navigation, Robotics and Augmented and Virtual Reality. Springer Nature. (in press)
- 19. Lohre R, **Goel DP.** Virtual Reality: The Future of Surgical Education in Orthopedics and Beyond. Paris International Shoulder Course. Paris, France. 14-16 February, 2019.
- 20. Lohre R, Bois A, Athwal GS, **Goel DP**, CSES. Immersive virtual reality demonstrates improved and efficient surgical skill acquisition in senior orthopedic residents: a prospective blinded randomized controlled trial. Can J Surg. 2019; 62(6 Suppl 1)
- 21. Lohre R, Goh, G, Parvizi, J and **Goel DP**: Virtual reality in education around revision knee surgery. AOTS (in press)
- 22. Lohre, Leveille, L. **Goel DP**. Novel Application of Immersive Virtual Reality Simulation Training: A Case Report. JAAOS (in press)
- 23. Jong, B and **Goel, D.P.** Managing Type III AC Joint Injuries. BCMJ, Vol. 60, No. 3, April 2018, page(s) 164-166.
- Frank, T., Tan, M, Chmelik, C., Regan, W.R. and Goel, D.P. Point of Contact Shoulder Ultrasound and the Financial Implications to WorksafeBC Patients: An Economic Analysis – Principal Investigator. (*in press*)
- 25. Jong, B and **Goel, D.P.** Biologic Options for Glenohumeral Arthritis. Clinics in Sports Medicine (in press)

- Jarvie, G., Pike, J.M. and Goel, D.P. The Imaging of Common Shoulder Disorders by Primary Care Physicians in British Columbia.– Principal Investigator. BCMJ, Vol. 59, No. 4, May 2017, page(s) 222-226
- 27. Jong, B. and **Goel, D.P.** Biologic Glenoid Resurfacing: An Effective Alternative in the Treatment of Osteoarthritis in the Young Active Patient **COA bulletin** Fall Edition 2016
- Pike, J.P. and Goel, D.P. The Utility of Remplissage in Shoulder Instability COA bulletin Spring Edition 2016.
- Frank, T., Carroll, M., Pike, J.M. and Goel, D.P. Management of Glenoid Bone Loss in Osteoarthritis. Techniques in Shoulder & Elbow Surgery: March 2016 - Volume 17 - Issue 1 - p 11–18)
- 30. Frank, T., Pike, J.M. and **Goel, D.P.** Office-based Shoulder Ultrasound for the Canadian Orthopedic Surgeon: **COA bulletin** Fall Edition 2015.
- 31. Goel, D.P., Romanowski, J.R., Yannopolous, P and Warner, J.J.P. Scapulothoracic Fusion. Orthopedic Knowledge Online Journal August 2014.
- 32. Goel D.P., Romanowski J.R., Shi L.L., Warner J.J.P. Scapulothoracic Fusion: outcomes and complications. J Shoulder Elbow Surg. 2013 Nov 23.
- 33. Goel, D.P. and Pike, J.M. Shoulder Hemiarthroplasty: How Important are the Tuberosities? COA Bulletin July 2012.
- Shah, A.S., Butler, R.B., Romanowski, J.R., Goel, D.P., and Warner, J.J.P. Latarjet Procedure: Outcomes and Complications J Bone Joint Surg Am. 2012 Mar 21;94(6):495-501.
- 35. **Goel, D.P.** and Drosdowech, D.S. Latissimus Dorsi Transfer and Reverse Total Shoulder Arthroplasty for Deltoid Deficiency **J Shoulder Elbow Surg**. 2012 May;21(5):e1-7.–
- Romanowski, JR., Goel, D.P and Warner, JJP. Shoulder Instability In. Evaluation and Management of Common Upper Extremity Disorders: A Practical Handbook pp.241-270
- Namdari, S., Goel, D.P., Romanowski, J.R., Glaser, D and Warner, J.J.P. Principles of glenoid component design and strategies for managing glenoid bone loss in revision shoulder arthroplasty in the absence of infection and rotator cuff tear. J Shoulder Elbow Surg. 2011 Jun 25
- Athwal, G.S., Macdermid, J. and. Goel, D.P. Estimation of Humeral Head Version Using the Medial Calcar: A CT Based Analytical Study. J Shoulder Elbow Surg (2010) 19, 1145-1149.
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- 2. Rotator Cuff Core Curriculum / Harvard Combined Orthopedic Residency Training Program: Romanowski, J.R., Goel, D.P., Wells, J., Higgins, L.D. and Warner, J.P.

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