



# The AO Spine RECODE-DCM International Collaborative—Establishing the Foundations for Accelerated and Patient-Centered Innovation

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On behalf of the AO Spine RECODE-DCM  
Steering Committee, AO Spine RECODE-DCM  
Global Partners and AO Spine RECODE-DCM Community

## Keywords

degenerative cervical myelopathy, cervical spondylotic myelopathy, consensus, Delphi, research priorities, outcomes, collaborative

AO Spine RECODE-DCM has brought together the views of 429 people with experience of living or working with DCM. The project's reach has been global—with participants representing 68 countries—but also cross specialty, including 17 different healthcare disciplines (Video 1).

Through this international multidisciplinary collaboration, we have collectively established the top research priorities, standardized data reporting sets and an agreed definition for DCM.<sup>1</sup> By creating a common language and establishing a shared mission, we hope this will provide the foundation for streamlined research inclusive of the perspectives of persons with DCM (Video 2). This is the largest project of its kind within the field of DCM.

However, while the original objectives of AO Spine RECODE-DCM are almost met, there still remain significant challenges for this initiative to meet its overall aim of accelerating knowledge discovery that can improve outcomes. Research within DCM is expanding but only a minority of this is currently aligned to the top research priorities.<sup>2</sup> Furthermore, the current landscape of dataset reporting remains heterogeneous, with definitions for DCM sharing this issue.<sup>3-5</sup> The next frontier for AO Spine RECODE-DCM is therefore **acting** upon the project's findings.

For example, the research priorities will need targeted investigation and dedicated funding. The creation of the AO Spine RECODE-DCM pilot program of research incubators, focused on 3 of the top 10 research priorities, seeks to kickstart this.<sup>6</sup>

This program aims to empower, support and unify multi-disciplinary and international working groups in tackling the top research priorities and addressing barriers to research translation. Additional engagement and support with this onward initiative is welcomed.<sup>6</sup> However, this scheme represents just one intervention, and additional but synergistic efforts will also be needed; after all, **raising awareness is the number one priority**.

Reflecting on our experience, it is both humbling and inspiring to witness a diverse community come together with a unified goal—to improve the lives of people with DCM. It is clear now that achieving this will require continuing collaboration, community expansion and likely many other approaches.

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**Video 1.** Research priorities in degenerative cervical myelopathy. <https://vimeo.com/416499745>



**Video 2.** Establishing the core outcomes set and common data elements in degenerative cervical myelopathy. <https://vimeo.com/cambridgetv/review/479299027/3771ccdb1d>

**Table 1.** Persons With DCM or Their Supporters Who Participated in AO Spine RECODE-DCM.

First name	Second name	Country
Carmen	Alicea	United Kingdom
Patricia	Allderidge	United Kingdom
Angelica	Alvarado	United States of America (USA)
Brian	Anderson	Saint Kitts and Nevis
Donavell	Aparicio	Philippines
Clive	Atkinson	Ecuador
Brian	Bairstow	United Kingdom
Brian	Baylis	Ukraine
Mark	Berry	Ecuador
Timothy	Boerger	USA
Brian	Bosley	United Kingdom
Gordon	Buckles	USA
Denise	Campos	USA
Zélia	Cardoso	France
Paul	Carroll	United Kingdom
Susan	Carter	USA
Julia	Carter	United Kingdom
Kate	Chalmers	United Kingdom
Louise	Clark	United Kingdom
Robin	Cohen	USA
Elizabeth	Coombes	Ukraine
Sally-Ann	Cotton	United Kingdom
Johanna	Councilor	USA
Beckie	Daniels	USA
Sally	Davis	United Kingdom
Frank	Dutton	United Kingdom
Wayne	Faircloth	New Zealand
Vanessa	Fisher	United Kingdom
Andrea	Ford	United Kingdom
Mario	Ganau	United Kingdom
Amalia	Gasson	United Kingdom
Mike	Geall	United Kingdom
Suzanne	Gleason	USA
Lynne	Gordon	Scotland
Pauline	Green	United Kingdom
Anita	Griffiths	United Kingdom
Samantha	Grodecki	USA
Michael	Hillman	USA
Delphine	Houlton	United Kingdom
Aaron	Howard	USA
Evangeline Paige	Howard	USA
Km	Huber	USA
Stephen	Hunter	United Kingdom
Liang	Jiang	China
Lydia	Johann	USA
Michelle	Johnson	USA
Angie	Jones	USA
Rita	Jones	United Kingdom
Greg	Kalista	USA
Marian	Kearney	United Kingdom
John	Kidd	Ukraine
Seok Woo	Kim	South Korea
Rudy	King	USA
Michael	Kunzman	USA
Peter	Lam	United Kingdom
Julie	Lansdale	Brazil
Janine	Largent	USA
Susan	Letby	United Kingdom

(continued)

**Table 1.** (continued)

First name	Second name	Country
Benjamin	Light	USA
Richard	Mackintosh	Lesotho
Monica	Mahon	United Kingdom
Judith	Martin	United Kingdom
Carol	Mcclure	Australia
Fiona	McCormick	United Kingdom
Penelope	Mclaren	Ecuador
Margot	Miller Racine	USA
Jennifer	O'Donnell	USA
Marianne	Phillips	United Kingdom
Jillian	Polasik	United Kingdom
Yvonne	Preston	United Kingdom
Lisa	Puttock	United Kingdom
David	Randall	United Kingdom
Angela	Repka	USA
Mary	Richmond	USA
Jo	Rone	Wales
Karen	Ruble	USA
Bridget	Russo	USA
Raine	Rye	USA
Iwan	Sadler	United Kingdom
Carla	Salzman	USA
Ellen	Sarewitz	United Kingdom
Angela	Sawyer	United Kingdom
Suzanne	Senior	Scotland
Michelle	Shewmake	USA
Robert	Shiels	United Kingdom
Daren	Smith	United Kingdom
Lisa Marie	Smith	Ecuador
Lara	Smith	United Kingdom
Solveig	Sommerseth	Norway
Christine	Stader	Ecuador
Alistair	Standing	Ecuador
Rob	Sterling	Canada
Tracey	Tajima	USA
Veronica	Tompsett	Ecuador
Randy	Trumbower	USA
Pia	Vayssiere	Switzerland
Rajesh	Verma	India
Shirley	Widdop	United Kingdom
Rochelle	Wieber	USA
Matt	Wilson	United Kingdom
Zachary	Zimmerman	USA

We would like to thank AO Spine, the James Lind Alliance, Myelopathy.org, our steering committee, global partners, ambassadors and study collaborators (Tables 1-4), without whom none of this work would be possible.

We believe the multi-stakeholder community of AO Spine RECODE-DCM can make further contributions to DCM. To this end, we would welcome any interest in joining the community and its projects, or enquiry as to how AO Spine RECODE-DCM could support other initiatives. Please visit [aospine.org/recode](http://aospine.org/recode) for further information, or contact the team at [research@aospine.org](mailto:research@aospine.org)

**Table 2.** Spinal Surgeons Who Participated in AO Spine RECODE-DCM.

First name	Second name	Affiliation	Country
Bizhan	Aarabi	University of Maryland School of Medicine and University of Maryland Medical Center	USA
Mohamed	Abdel-Wanis	Sohag Faculty of Medicine	Egypt
Ahmed	Abdelrahman	Zagazig University	Egypt
Jafri	Abdullah	Hospital Universiti Sains Malaysia	Malaysia
Alexios	Adamides	Royal Melbourne Hospital	Australia
Adefisayo	Adekanmbi	University College Hospital Ibadan	Nigeria
Osundina	Ahmad	University of Medical Science Teaching Hospital Laje	Nigeria
Henry	Ahn	University of Toronto and St Michaels Hospital	Canada
Sashin	Ahuja	University Hospital of Wales, Cardiff	Wales
Tamir	Ailon	University of British Columbia	Canada
Rafid	Al-Mahfoudh	Brighton and Sussex University Hospitals	United Kingdom
Olger	Alarcon	National Edgardo Rebagliati Hospital	Peru
Aleksandr	Aleinik	Privolzhsky Research Medical University	Russian Federation
Hayder	Algburi	Private Hospital	Iraq
Amanj	Ali	Shar Teaching Hospital	Iraq
Rohit	Amritanand	Christian Medical College, Vellore	India
Jose Joefrey	Arbatin	Chong Hua Hospital, Cebu	Philippines
Paul	Arnold	Carle Foundation Hospital	USA
Viswanadha	Arun Kumar	Mallika Spine Centre	India
Selim	Ayhan	Acibadem Mehmet Ali Aydinlar University	Turkey
Saleh	Baeesa	King Abdulaziz University Hospital	Saudi Arabia
Jitin	Bajaj	NSCB Government Medical College, Jabalpur	India
Abdul Hafid	Bajamal	Dr Soetomo General Hospital, Surabaya	Indonesia
Alexander David Laing	Baker	Specialist Centre for Spinal Surgery Lancashire Teaching Hospitals	Venezuela
Joseph	Baker	Waikato Hospital and University Of Auckland	New Zealand
Giuseppe Mv	Barbagallo	University of Catania	Italy
Giovanni	Barbagli	Azienda Ospedaliero-Universitaria Careggi, Firenze	Italy
Tony	Bateman	Royal Derby Hospital	United Kingdom
Pedro	Bazán	Higa San Martín De La Plata, Hospital Italiano La Plata and Universidad Nacional De La Plata	Argentina
Telmo Augusto Barba Belsuzarri	Belsuzarri	Pontifical Catholic University of Campinas, Aacd Hospital São Paulo and Beneficiencia Portuguesa Hospital of Campinas	Brazil
Ed	Benzel	Cleveland Clinic Ohio	USA
Indira Devi	Bhagavatula	National Institute of Mental Health and Neurosciences, Bangalore	India
Pragnesh	Bhatt	Aberdeen Royal Infirmary and University of Aberdeen	United Kingdom
David	Bludovsky	Clinic of Neurosurgery, University Hospital In Plzen and Charles University in Prague	Czech Republic
Vishal	Borse	Leeds General Infirmary	United Kingdom
Carlo	Brembilla	Popo John XXIII Hospital	Italy
Avery	Buchholz	University of Virginia	USA
Ali	Bydon	Johns Hopkins University Hospital, Baltimore	USA
Francesco	Cacciola	Department of Neurosurgery, Azienda Ospedaliero-Universitaria Senese Le Scotte	Italy
Mario	Cahueque	Hospital Centro Medico	Guatemala
Kai	Cao	The Second Affiliated Hospital of Nanchang University	China
Barbara	Cappelletto	University Hospital of Udine	Italy
Enrique	Caro-Osorio	Tecnologico De Monterrey	Mexico
Clovis	Castanho	Hospital AACD	Brazil
Francesco	Certo	Department of Neurological Surgery, Policlinico "G. Rodolico" University Hospital	Italy
Richard	Chaloupka	University Hospital Brno and Masaryk University	Czech Republic
David	Chan	Prince of Wales Hospital, Hong Kong	China
Amitabha	Chanda	Apollo Hospitals Dhaka, Bangladesh	Bangladesh
Sarat	Chandra	All India Institute of Medical Sciences	India
Anastasios	Charalampidis	Karolinska University Hospital	Sweden
Sandip	Chatterjee	Park Clinic and Health University, West Bengal	India

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**Table 2.** (continued)

First name	Second name	Affiliation	Country
Chee Pin	Chee	Private Hospitals	Malaysia
Joseph	Cheng	University of Cincinnati	USA
Jason Pui Yin	Cheung	The University of Hong Kong	China
Harvinder	Chhabra	Indian Spinal Injuries Centre	India
Chaitanya	Chikhale	Maharashtra University of Health Sciences	India
Yuriy	Chomolyak	Uzhhorod National University	Ukraine
Sean	Christie	Dalhousie University	Canada
Chun Kee	Chung	Seoul National University	South Korea
Simon	Clark	Walton Centre, Liverpool	United Kingdom
Juan	Condori	Rebagliati/Universidad San Marcos	Peru
Stipe	Corluka	Spinal Surgery Division, Department of Traumatology, University Hospital Centre Sestre Milosrdnice, Zagreb, Croatia	Croatia
Giles	Critchley	Brighton and Sussex University Hospitals	United Kingdom
Mhran	Daie	Damascus University	Iraq
Bharat	Dave	Stavya Spine Hospital & Research Institute, Ellisbridge	India
Gavin	Davis	Cabrini and Austin Health	Australia
Michelangelo	De Angelis	IRCCS Istituto Neurologico Mediterraneo	Italy
Nicolas	Dea	Vancouver General Hospital and the University of British Columbia	Canada
Joost	Dejaegher	University Hospitals Leuven	Belgium
Leonardo	Delgadillo	Imss Umae Hospital De Pediatría	Mexico
Andreas	Demetriades	Western General Hospital, Edinburgh	Scotland
Kenan	Deniz	Leeds General Infirmary	United Kingdom
Bart	Depreitere	University Hospitals Leuven	Belgium
Chris	Derham	Leeds General Infirmary	United Kingdom
Sasi	Dharan	Manipal Hospital	India
Alberto	Di Martino	Università Di Bologna, Rizzoli Institute	Italy
Dave Anthony	Dizon	University of The Philippines Manila and Philippine General Hospital	Philippines
Aniekan	Ekere	Rehoboth Specialist Hospital, Port Harcourt	Nigeria
Nasser	El-Ghandour	Department of Neurosurgery, Cairo University	Egypt
Youssry	Elhawary	Cairo University	Egypt
Adrian	Elmi Terander	Karolinska University Hospital	Sweden
Austin	Enright	Hawkes Bay District Health Board, Royston Hospital	New Zealand
José	Estrada Mastache	Autonomous University of Mexico (UNAM)	Mexico
Francis	Farhadi	The Ohio State University	USA
Arash	Fattahi	7Tir Hospital and Iran University of Medical Sciences	Iran
Michael	Fehlings	University of Toronto and Toronto Western Hospital	Canada
Kostas	Fountas	University Hospital of Larisa and University Of Thessaly	Greece
Jibin	Francis	Netcare Greenacres Hospital, Port Elizabeth	South Africa
Brett	Freedman	Mayo Clinic Rochester	USA
Federico	Fusini	Orthopaedic and Trauma Center, Città Della Salute E Della Scienza Di Torino, Università Degli Studi Di Torino	Italy
Pravesh Shankar	Gadjraj	Leiden University Medical Center	Netherlands
Chandrashekar	Gaike	MGM Medical College, Aurangabad	India
Marisa	Gandía	Hospital Universitario La Paz	Spain
Bhavuk	Garg	All India Institute of Medical Sciences	India
Charalampos	Gatos	University Hospital of Larissa Thessaly	Greece
Iordanis	Georgiadis	Animus Blue Cross General Clinic	Greece
Miltiadis	Georgiopoulos	University Hospital of Patras and University of Patras	Greece
Paul	Gerdhem	Karolinska University Hospital	Sweden
Fariborz	Ghaffarpasand	Shiraz University of Medical Sciences	Iran
Aprajay	Golash	Lancashire Teaching Hospitals	United Kingdom
Lukas	Grassner	Medical University Innsbruck	Austria
Randolph	Gray	Royal North Shore Hospital	Australia
James	Guest	University of Miami	USA
Alfredo	Guiroy	Spanish Hospital	Argentina
Artem	Gushcha	Research Center of Neurology	Russian Federation
Mitchell	Hansen	John Hunter Hospital and University of Newcastle	Australia
Ran	Harel	Sheba Medical Center	Israel
Simon	Harris	Scarborough Health Network and University Of Toronto	Canada

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Table 2. (continued)

First name	Second name	Affiliation	Country
James	Harrop	Thomas Jefferson University	USA
Atsushi	Hasegawa	Seichikai Memorial Hospital and Kyorin University	Japan
Sayed Uddin	Helal	Centre for the Rehabilitation of the Paralysed	Bangladesh
Eirik	Helseth	Oslo University Hospital and University of Oslo	Norway
Omar	Herrera	Hospital General De Queretaro México	Mexico
Zachary	Hickman	Icahn School of Medicine at Mount Sinai and NYC Health+ Hospitals	USA
Christopher	Holland	Carolina Neurosurgery & Spine Associates	USA
Kismet	Hossain-Ibrahim	University Of Dundee	United Kingdom
Brian	Hsu	Macquarie University	Australia
Vanessa	Hubertus	Charité Berlin Neurosurgery	Germany
Ahmed	Ibrahim	Queens University Hospital	United Kingdom
Olufemi	Idowu	Lagos State University Teaching Hospital and Lagos State University	Nigeria
Soobin	Im	Soonchunhyang University Bucheon Hospital	South Korea
Tae-Ahn	Jahng	Seoul National University Hospital	South Korea
Ibrahim	Jalloh	University of Cambridge	United Kingdom
Vinay	Jasani	University Hospital of North Midlands	United Kingdom
Subbiah	Jayakumar	Devadoss Hospital	India
Fan	Jiang	Toronto Western Hospital	Canada
Ron	Jithoo	Monash University	Australia
Andrei	Joaquim	University of Campinas	Brazil
Samuel	Johnson	Armed Forces Hospital Muscat	Oman
Patrik	Jurek	Krajska Nemocnice T. Bati	Czech Republic
Kantenga	Kabulo	Parirenyatwa Hospital and University of Zimbabwe	Zimbabwe
Serdar	Kahraman	Anadolu Health Center, Johns Hopkins University, Istanbul	Turkey
Takashi	Kaito	Osaka University Graduate School Of Medicine and Osaka University Hospital	Japan
Kalyan Kumar Varma	Kalidindi	Indian Spinal Injuries Center	India
Rishi Mugesh	Kanna	Ganga Hospital, Coimbatore	India
So	Kato	The University of Tokyo	Japan
Prashant	Kekre	Sundaram Medical Foundation, Chennai	India
Michael	Kelly	Washington University School of Medicine	USA
Amit	Keren	Technion-Israeli Institute of Technology	Israel
Kevin	Khalsa	Private Practice	USA
Cumhur	Kilincer	Trakya University, Edirne	Turkey
Seok Woo	Kim	Hallym University Sacred Heart Hospital	South Korea
Insoo	Kim	Keimyung University and Dongsan Hospital	South Korea
Zdenek	Klezl	University Hospitals Derby and Burton	United Kingdom
Michael	Knight	Ramsay Health	Australia
Masao	Koda	University of Tsukuba	Japan
Paul	Koljonen	University of Hong Kong Department of Orthopaedics & Traumatology	Honduras
Aleksandr	Krutko	Novosibirsk Scientific Research Institute of Traumatology and Orthopaedics	Russian Federation
Nilaksha	Kumarasinghe	National Hospital of Sri Lanka	Sri Lanka
Yunus	Kuntawi Aji	Dr. Soetomo Academic Medical Center Hospital	Indonesia
Shekar	Kurpad	Medical College of Wisconsin	USA
Brian	Kwon	University of British Columbia	Canada
Rodney	Laing	Cambridge University Hospital and University of Cambridge	United Kingdom
Nicolas	Lauper	The Geneva University Hospitals	Switzerland
Aaron	Lawson Mclean	Jena University Hospital & Friedrich Schiller University Jena	Germany
John	Leach	Salford Royal, Manchester	United Kingdom
Jun Ho	Lee	Kyung Hee University Medical Centre	South Korea
Jens	Lehmburg	Munich Clinic, Teaching Hospital of the Technical University Munich	Germany
Paolo	Lepori	IRCCS Istituto Ortopedico Galeazzi Milano	Italy
Charles	Li	The Alfred	Australia
Boon Seng	Liew	Hospital Sungai Buloh	Malaysia
Clifford	Lin	Oregon Health And Science University	USA
Baoge	Liu	Beijing Tiantan Hospital, Capital Medical University	China
Kimmo	Lonnrot	Helsinki University Hospital	Finland
Peter	Loughenbury	Leeds Teaching Hospitals	United Kingdom
Hu Liang	Low	Queen's Hospital, Romford	United Kingdom
Saheel	Maajid Anwar	Skims University Hospital, Srinagar	India

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**Table 2.** (continued)

First name	Second name	Affiliation	Country
Venkatesh	Madhugiri	St. John's Medical College and Hospital	India
Melvin	Makhni	Brigham And Women's Hospital and Harvard Medical School	USA
K S	Manjunath Prasad	James Cook University Hospital	United Kingdom
Francisco	Mannara	Hospital Fernández, Facultad De Medicina Universidad De Buenos Aires	Argentina
Konstantinos	Margetis	Icahn School of Medicine at Mount Sinai	USA
Niklas	Marklund	Lund University	Sweden
Allan R.	Martin	Toronto Western Hospital, University Health Network	Canada
Antonio	Martin-Benlloch	Hospital Universitario Dr Peset, Valencia	Spain
Toru	Maruyama	Saitama Prefectural Rehabilitation Center, Tokyo University	Japan
Eric	Massicotte	University of Toronto	Canada
Jacob	Mathew	Coe Neurosciences And Orthopaedics, Aster Medcity	India
Vineesh	Mathur	Medanta, The Medicity, Global Healthcare Pvt Ltd.	India
Helder	Mauricio	Hospital Beatriz Angelo	Portugal
Jason	McMillen	Royal Brisbane & Women's Hospital and University of Queensland	Australia
Arne	Mehrkens	Basel University Hospital	Switzerland
Ankit	Mehta	University of Illinois At Chicago	USA
Richard	Menger	University of South Alabama	USA
Fassil	Mesfin	University of Missouri School of Medicine	USA
Bernhard	Meyer	Klinikum Rechts Der Isar, Technische Universität München	Germany
Arya	Mishra	Royal Derby Hospital	United Kingdom
Sergey	Mlyavykh	Trauma and Orthopaedic Institute (University Clinic), Privolzhsky Research Medical University	Russian Federation
Nizar	Moayeri	UMC Utrecht	Netherlands
Ralph	Mobbs	University of New South Wales, Sydney	Australia
Antonio	Mock	Hospital Santo Tomas	Panama
Chandan	Mohanty	Bombay Hospital Institute of Medical Sciences	India
Hans	Möller	Karolinska University Hospital, Karolinska Institutet	Sweden
Don	Moore	University of Missouri	USA
Andreas	Morakis	Kat Hospital, Athens	Greece
Kevin	Morris	Hull And East Yorkshire Teaching Hospitals	United Kingdom
Nitin	Mukerji	James Cook University Hospital	United Kingdom
Praveen	Mummaneni	University of California San Francisco	USA
Kazuyoshi	Nakanishi	Hiroshima University Hospital	Japan
Pablo	Negri	Hospital Fernandez	Argentina
Abhay	Nene	Lilavati Hospital	India
Andrii	Netliukh	Lviv City Emergency Hospital and Danylo Halitsky Lviv National Medical University	Ukraine
Nuno	Neves	Centro Hospitalar São João and University of Porto	Portugal
Satoshi	Nori	Tokyo Dental College Ichikawa General Hospital, Keio University School of Medicine	Japan
Aria	Nouri	Hôpitaux Universitaires De Genève	Switzerland
Junichi	Ohya	Japanese Red Cross Medical Center	Japan
Mehmet Bulent	Onal	Acibadem Hospital	Turkey
Georg	Osterhoff	University of Leipzig	Germany
Orso	Osti	Calvary Health Care and the University of Adelaide	Australia
Deb	Pal	Leeds Teaching Hospitals	United Kingdom
Kamalanathan	Palaniandy	Universiti Kebangsaan Malaysia	Malaysia
Naveen	Pandita	Primus Superspeciality Hospital	India
Jerome	Paquet	Chu Quebec Laval University	Canada
Scott	Paquette	Vancouver General Hospital and University Of British Columbia	Canada
Eugene	Park	Chungnam National University Hospital	South Korea
Paul	Park	University of Michigan	USA
Jong-Beom	Park	Uijeongbu St. Mary's Hospital, The Catholic University of Korea College of Medicine	South Korea
Thanasis	Paschalis	University Hospital of Larissa, University of Thessaly	Greece
Peter	Passias	New York University Medical Center	USA
Santosh	Paudel	National Academy of Medical Sciences, National Trauma Center	Canada
Paulo	Pereira	Centro Hospitalar Universitário São João and the University of Porto	Portugal
Wilco	Peul	University Neurosurgical Center Holland, LUMC, Haga Teaching Hospital	Netherlands

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Table 2. (continued)

First name	Second name	Affiliation	Country
Guilherme	Piletti	Hospital Tacchini	Brazil
João	Pinheiro	Centro Hospitalar Universitário Coimbra	Portugal
Enrico	Pola	A. Gemelli University Hospital, Catholic University of Rome	Italy
Eugen Cezar	Popescu	Clinical Hospital "Prof. N. Oblu" Iasi	Romania
Joseph	Quillin	Emory University	USA
Vafa	Rahimi-Movaghar	Sina Trauma and Surgery Research Center, Tehran University of Medical Sciences	Iran
Dr. Md. Munzur	Rahman	Rajshahi Medical College & Hospital	Bangladesh
Manuel	Ramirez	Valle Hebron Hospital	Spain
Robert	Ravinsky	Banner University Medical Center	USA
Sergei	Riabykh	Russian Scientific Ilizarov Center	Russian Federation
Olivier	Ricart	Hôpitaux Robert Schuman Luxembourg	Luxembourg
Yam Bahadur	Roka	Neuro Cardio and Multispecialty Hospital	Nepal
Gary	Rosenberg	Anaheim Regional Medical and Placentia Linda	USA
Brett	Rosenthal	Massachusetts General Hospital and Harvard University	USA
Marjan	Rozankovic	UHC Zagreb	Croatia
Youssoupha	Sakho	Hôpital Grand Yoff Université Cheikh Anta Diop Dakar	Senegal
Mykola	Salkov	Dnipro Regional Hospital	Ukraine
Talia	Sánchez Garzon	Centro Médico Nacional Siglo XXI	Mexico
Savitr	Sastri	Health City Cayman Islands	Cayman Islands
Ralph	Schär	Bern University Hospital	Switzerland
Bawarjan	Schatlo	University Hospital Göttingen	Germany
Michel	Schneider	University of Toronto and Balgrist University Hospital Zurich	Switzerland
Matti	Scholz	BG Unfallklinik Frankfurt Am Main	Germany
Halil Ibrahim	Secer	University of Kyrenia	Cyprus
Jonathan	Sembrano	University of Minnesota	USA
Hamisi Kimaro	Shabani	Muhimbili Orthopaedic Institute	Tanzania
Siddharth	Shah	Queens Medical Centre, Nottingham	United Kingdom
Jeevan	Sharma	Indian Spinal Injuries Center	India
Ayush	Sharma	Central Railway Hospital	India
Abd-Elhafiz	Shehab-Eldien	Elsahil Teaching Hospital	Egypt
Ajoy Prasad	Shetty	Ganga Hospital	India
Ehab	Shiban	Augsburg University	Germany
Pawan Kumar	Shrestha	Devdaha Medical College	Nepal
Sandeep	Shrivastava	Datta Meghe Institute of Medical Sciences	India
Ahmed	Siam	Helios Klinik Köthen	Germany
Kachinga	Sichizya	University Teaching Hospital, Lusaka	Zambia
Yash	Singh	B.P. Koirala Institute of Health Sciences	Nepal
Priyank	Sinha	Leeds General Infirmary	United Kingdom
Zachary	Smith	Northwestern University	USA
Sean	Smith	Queen Elizabeth Hospital, Bridgetown	Barbados
Reuben	Soh	Singapore General Hospital	Singapore
Prabu Rau	Sriram	Queen Elizabeth Hospital	Malaysia
Ralph	Stanford	Prince of Wales Hospital	Austria
Konstantinos	Starantzis	Euroclinic Athens	Greece
Patrick	Statham	Western General Hospital Edinburgh	United Kingdom
Olaf	Suess	Drk Kliniken Berlina and Teaching Hospital Of Charité Berlin	Germany
Rafael Lindi	Sugino	Hospital Israelita Albert Einstein	Brazil
Shurei	Sugita	Tokyo Metropolitan Cancer and Infectious Disease Center Komagome Hospital	Japan
Narayana	Swamy	Netaji Subhash Chandra Medical College and Madhya Pradesh Health University	India
Nobuaki	Tadokoro	Kochi University	Japan
Toshiyuki	Takahashi	Fujieda Heisei Memorial Hospital	Japan
Yuki	Taniguchi	The University of Tokyo Hospital	Japan
Gerardo	Taylor	Public Hospital Chimaltenango	Guatemala
Jin	Tee	Alfred Hospital and Monash University	Australia
Tsegazeab Laeke	Teklemariam	Addis Ababa University, Black Lion Specialized Hospital	Ethiopia
Marco	Teli	Walton Centre, Liverpool	United Kingdom
Serge Eddy	Teneku Mba	Parirenyatwa Group of Hospitals and University of Zimbabwe	Zimbabwe
Paula Valerie	Ter Wengel	HMC, Spaarne Gasthuis	Netherlands

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**Table 2.** (continued)

First name	Second name	Affiliation	Country
Enrico	Tessitore	Geneva University Hospitals	Switzerland
Khoi	Than	Oregon Health & Science University	USA
Simon	Thomson	Leeds General Infirmary	United Kingdom
Adetunji	Toluse	National Orthopaedic Hospital Igbobi-Lagos	Nigeria
Mohamed Amine	Triki	Chu Sahloul Université De Sousse Tunisie	Tunisia
Manjul	Tripathi	Post Graduate Institute of Medical Education and Research, Chandigarh	India
Alexander	Vaccaro	Thomas Jefferson University	USA
Peter	Vajkoczy	Charite Universitätsmedizin Berlin	Germany
Pia	Vayssiere	Hôpitaux Universitaires de Genève	Switzerland
Sotiris	Veranis	251 General Air Force and Reserve Hospital	Greece
Pierluigi	Vergara	Ipswich/Broomfield Hospitals	United Kingdom
Andrea	Veroni	Salus Hospital	Italy
Pablo	Villanueva	Hospital Lucio Molas, La Pampa	Argentina
Giulio Carlo	Wembagher	Careggi Hospital, Florence	Italy
Thomas	Westermaier	University Hospital Wuerzburg	Germany
Paul C.	Willems	Maastricht University Medical Centre	Netherlands
Jamie	Wilson	Toronto Western Hospital	Canada
Timothy	Witham	Johns Hopkins University	USA
George Kwok Chu	Wong	Prince of Wales Hospital, the Chinese University of Hong Kong	China
Bethelehem Yesehak	Worku	Addis Ababa University	Ethiopia
Maria	Wostrack	Klinikum Rechts Der Isar, Technical University of Munich	Germany
Guy	Wynne-Jones	The Newcastle Upon Tyne NHS Foundation Trust	United Kingdom
Mitsuru	Yagi	Keio University Hospital	Japan
Tseng Tsai	Yeo	National University Hospital	Singapore
Hiroyuki	Yoshihara	SUNY Downstate Medical Center	USA
Ratko	Yurac	Clínica Alemana De Santiago and University Del Desarrollo	Chile
Takashi	Yurube	Kobe University Graduate School Of Medicine	Japan
Juan José	Zamorano	Clínica Alemana De Santiago and Universidad Del Desarrollo	Chile
Mohammad	Zarrabian	Health Sciences Centre Winnipeg and University Of Manitoba	Canada
Amy	Zheng	Nottingham University Hospital Trust and Derby Royal Hospital	United Kingdom
Matteo	Zoli	IRCCS Istituto Delle Scienze Neurologiche Di Bologna	Italy

**Table 3.** Other Healthcare Professionals Who Participated in AO Spine RECODE-DCM.

First name	Second name	Affiliation	Country
Amos	Adeleye	University of Ibadan and University College Hospital	Nigeria
Uzeyir	Ahmadli	State Hospital Triemli Zurich and University Hospital of Zurich	Switzerland
Abenezer	Aklilu	Black Lion Hospital, Addis Ababa University	Ethiopia
Ravindaran	Alagasan	International Medical University Malaysia	Malaysia
Judith	Allanson	Cambridge University Hospitals and University of Cambridge	United Kingdom
Charlotte	Anderson	University of Toronto	Canada
Rebeca	Angulo	Ccss Hospital San Juan De Dios	Costa Rica
Richard	Bartlett	Royal Preston Hospital	United Kingdom
Josef	Bednarik	University Hospital Brno	Czech Republic
Jatta	Berberat	Kantonsspital Aarau	Switzerland
Loric	Berney	University Hospital of Lausanne	Switzerland
Charles	Bertoia	Private Clinical Practice	United Kingdom
Anthony	Burns	University Of Toronto	Canada
Lloyd	Buscomb	Waikato Chiropractic Clinic	New Zealand
Gianfilippo	Caggiari	Università Degli Studi Di Sassari	Italy
Ian	Cameron	University of Sydney and Northern Sydney Local Health District	Australia
Jason	Carmel	Columbia University	USA
Lovely	Chaudhary	Indian Spinal Injuries Centre	India
Robert	Chen	Toronto Western Hospital and University of Toronto	Canada
Araceli	Chico	Clinico Quirurgico Hermanos Ameijeiras La Habana Cuba	Venezuela
Agnes	Chmiel	McMaster University	Canada

(continued)

**Table 3.** (continued)

First name	Second name	Affiliation	Country
Eric Chun Pu	Chu	New York Medical Group	Honduras
Kendrah	Da Silva	University of Johannesburg	South Africa
Emma	Davies	University of Cambridge	United Kingdom
Megan	Donaldson	Tufts University School of Medicine	USA
Jane	Easton	Cambridge University Hospital	United Kingdom
Nathalie	Edmunds	Royal College of Surgeons in Ireland	Ireland
Gülin	Findikoglu	Pamukkale University Hospital	Turkey
Gil	Faclier	Sunnybrook/WCH	Canada
Caitlin	Farmer	St. Vincent's Hospital Melbourne	Australia
Wolfgang	Freund	University of Ulm	Germany
Patrick	Freund	Balgrist	Switzerland
Andrea	Furlan	University of Toronto	Canada
Fernando	Garcia Del Carrizo	Salford Royal, Manchester	United Kingdom
Ravindra Kumar	Garg	King George Medical University Lucknow	India
Kate	Gladney	Adelaide West Physiotherapy	Canada
Heidi	Gurney	Cambridge University Hospital	United Kingdom
Jim	Hamer	The Ottawa Hospital	Canada
Brian	Hilgeman	Medical College of Wisconsin	USA
Khin Myo	Hla	Yangon General Hospital, University of Medicine I	Myanmar
Mohammad Anwar	Hossain	Centre for the Rehabilitation of the Paralysed	Croatia
Yong	Hu	Dept of Orthopaedics and Traumatology, University of Hong Kong	China
Michèle	Hubli	Spinal Cord Injury Center, Balgrist University Hospital and University of Zurich	Switzerland
Tiina	Ihalainen	Tampere University Hospital and Tampere University	Finland
Sukhvinder	Kalsi-Ryan	Toronto Rehabilitation Institute	Canada
Vladimir	Kenis	The Turner Institute for Children's Orthopedics	Russian Federation
Ruth	Kirschner-Hermanns	Neuro-Urology/Urology, University Clinic in Bonn	Germany
Steven	Kirshblum	Kessler Institute and Rutgers University	USA
Christine	Kremer	Neurology Department, Skåne University Hospital, Department of Clinical Sciences Lund University	Sweden
Minji	Lam	University of South Wales	United Kingdom
Indu	Lawes	University of Cambridge	United Kingdom
Hui	Lee	The Alfred, Melbourne	Australia
Matthew	Major	Northwestern University	USA
Ailish	Malone	Royal College of Surgeons in Ireland	Ireland
Alberto	Martinez-Arizala	University of Miami	USA
James	Milligan	McMaster University	Canada
Salvatore	Minnella	Italian Scientific Spine Institute	Italy
Marco	Molinari	Fondazione Santa Lucia IRCCS	Italy
Giovanni	Morone	Santa Lucia Foundation, IRCCS	Italy
Trisha	Mukherjee	Cambridge University Hospital	United Kingdom
Suzanne	Murphy	Royal College of Surgeons in Ireland	Ireland
Donald R.	Murphy	Alpert Medical School of Brown University	USA
Phyu Phyu Nwe	Myint	Yangon General Hospital and University of Medicine I	Myanmar
Monika	Nukala	Ah Institute of Medical Science	India
Aine	O'Gara	Mater Misericordiae University Hospital	Ireland
Siobhan	O' Neill	University of British Columbia	Canada
Nilufer Kutay	Ordu Gokkaya	Ministry of Health, University of Health Sciences	Turkey
Arsenio	Paez	Northeastern University Boston and University of Oxford	USA
Richard	Peace	Peace Chiropractic Clinic	Ireland
Charles	Pickard	CFFM Kitchener Private Practice	Canada
Henry	Pollard	Central Queensland University	Australia
Laura	Pollock	General Practice, Manchester	United Kingdom
Julio	Quispe	Universidad San Francisco De Quito	Ecuador
Dr	Rehman	International Medical University	Malaysia
Carly	Rivers	Rick Hansen Institute	Canada
Jan	Rosner	Spinal Cord Injury Center, Balgrist University Hospital	Switzerland
Luca	Saba	Azienda Ospedaliero Universitaria Di Cagliari	Italy
Abdul	Sankari	Wayne State University	USA
Nathaniel	Schuster	University Of California, San Diego Medical Center	USA

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**Table 3.** (continued)

First name	Second name	Affiliation	Country
Giorgio	Scivoletto	Ircs Fondazione S. Lucia	Italy
David	Seligman	Royal College of Surgeons in Ireland	Canada
Mahdi	Sharif-Alhoseini	Sina Trauma and Surgery Research Center, Tehran University of Medical Sciences	Iran
Ahmed	Shehab Eldein	Al Mahalla General Hospital	Egypt
Clive	Sherwood	None	United Kingdom
Faris	Shweikeh	None	USA
Tatiana	Sigaleva	Research Center of Neurology	Russian Federation
Sarvesh Kumar	Singh	National Institute of Ayurveda Jaipur	India
Heather	Smith	American Physical Therapy Association	USA
Arif	Soomro	Private Practice/Royal College of Chiropractors	United Kingdom
Egon	Stenager	University of Southern Denmark	Denmark
Laura	Stewart	Cambridge University Hospital	United Kingdom
David	Stoyanoff	Bridgepoint Hospital	Canada
Julia	Tabrah	Berkshire Healthcare NHS Foundation Trust	USA
Lindsay	Tetreault	University College Cork	Ireland
Caroline	Treanor	National Centre for Neurosurgery. Dublin	Ireland
Albina	Tretiakova	A.P. Romodanov Institute of Neurosurgery	Ukraine
Kenneth	Weber	Stanford University	USA

**Table 4.** The AO Spine Knowledge Forum Spinal Cord Injury Called for Ambassadors to Join the AO Spine RECODE-DCM Community. They Have Formed International Special-Interest “Incubators” (Groups of Clinicians, Other Healthcare Professionals, and Individuals with Lived Experience) Focused On: Natural History, Diagnostic Criteria, and Peri-operative Rehabilitation. These Groups Are Led by Knowledge Forum Representatives.

Diagnosis Criteria-Incubator			
Last and first name	Affiliation	Country	Role
Fehlings, Michael	Neurosurgeon, Division of Neurosurgery, Department of Surgery, University of Toronto, Toronto, ON	Canada	Chair
Tetreault, Lindsay	Scientist & Neurology resident, New York University, Langone Health, Graduate Medical Education, Department of Neurology, New York, NY	USA	Leadership Committee
Rodrigues-Pinto, Ricardo	Orthopaedic surgeon, Spinal Unit (UVM), Department of Orthopaedics, Centro Hospitalar Universitário do Porto—Hospital de Santo António, Porto.	Portugal	Leadership Committee
Wilson, Jamie RF.	Neurosurgeon, University of Nebraska Medical Center, Department of Neurosurgery, Omaha, Nebraska	USA	Leadership Committee
Kimmatkar, Nitin	Orthopaedic surgeon, Government Medical College Nagpur, Nagpur	India	Leadership Committee
Milligan, Jamie	Family Physician, McMaster University Department of Family Medicine, Hamilton, ON	Canada	Leadership Committee
Davies, Benjamin	Scientist & Neurosurgery resident, Myelopathy.org, International Charity for Degenerative Cervical Myelopathy. Department of Neurosurgery, University of Cambridge	United Kingdom	AO Spine RECODE-DCM Co-PCI
Yurac, Ratko	Orthopaedic surgeon, Universidad del Desarrollo, Santiago	Chile	Team Member
Cameron, Lucy	MSK Physiotherapist, University Hospitals NHS Foundation Trust, Addenbrooke's or Rosie Hospital, Cambridge	United Kingdom	Team Member
Zipser, Carl	Neurologist, University Spine Center, Balgrist University Hospital, Zurich	Switzerland	Team Member
Abdel-Wanis, Mohamed	Orthopaedic surgeon, Sohag Faculty of Medicine, Sohag Governorate	Egypt	Team Member
Sarewitz, Ellen	Person with lived experience and communication specialist. Myelopathy.org, International Charity for Degenerative Cervical Myelopathy	United Kingdom	Team Member
Bruno Lourenço Costa	Orthopaedic surgeon, Hospital de São Teotónio (Centro Hospitalar Tondela—Viseu, Epe), Coimbra	Portugal	Team Member
Widdop, Shirley	Person with lived experience, former nurse. Myelopathy.org, International Charity for Degenerative Cervical Myelopathy	United Kingdom	Team Member
Betz, Michael	Orthopaedic surgeon, University Spine Center, Balgrist University Hospital, Zurich	Switzerland	Team Member
Obadaseraye, Oke	Senior Registrar-Orthopaedics and trauma, Nigeria	Africa	Team Member

(continued)

**Table 4.** (Continued)

Diagnosis Criteria-Incubator			
Last and first name	Affiliation	Country	Role
Pedro, Karlo	Neurosurgeon, University of the Philippines, Philippine General Hospital, Manila	Philippines	Team Member
Wood, Lianne	Senior Physiotherapist, Clinical Doctoral Research Fellow, Nottingham University Hospital, Newcastle	United Kingdom	Team Member
Margetis, Konstantinos	Neurosurgeon, Icahn School of Medicine at Mount Sinai, New York	USA	Team Member
Natural History—Incubator			
Last and first name	Affiliation	Country	Role
Harrop, James	Department of Neurological Surgery, Thomas Jefferson University, Philadelphia, PA	USA	Chair
Yurac, Ratko	Orthopaedic surgeon, Universidad del Desarrollo, Santiago	Chile	Leadership Committee
Dejaegher, Joost	Neurosurgeon, Faculty of Medicine KU Leuven, Leuven	Belgium	Leadership Committee
Nouri, Aria	Scientist & Neurosurgery resident, Division of Neurosurgery, Geneva University Hospitals, University of Geneva	Switzerland	Leadership Committee
Tessitore, Enrico	Neurosurgeon, Division of Neurosurgery, Geneva University Hospitals, University of Geneva	Switzerland	Leadership Committee
Kumar, Vishal	Orthopaedic surgeon, Medica Hospital Ranchi, Chandigarh	India	Leadership Committee
Davies, Benjamin	Scientist & Neurosurgery resident, Myelopathy.org, International Charity for Degenerative Cervical Myelopathy	United Kingdom	AO Spine RECODE-DCM Co-PCI
Murphy, Rory	Department of Neurosurgery, University of Cambridge	USA	Team Member
WYNNE-JONES, Guy	Neurosurgeon, Barrow Neurological Institute, Arizona	United Kingdom	Team Member
F. Arbatin, Jose Joefrey	Neurosurgeon, The Newcastle Upon Tyne Hospitals NHS Foundation Trust, Newcastle	Philippines	Team Member
Sadler, Iwan	Orthopaedic surgeon, University Of The Philippines, Nabdaue City	United Kingdom	Team Member
Zamorano, Juan José	Person with lived experience and Graphic Designer. Myelopathy.org, International Charity for Degenerative Cervical Myelopathy	United Kingdom	Team Member
Kato, So	Orthopaedic surgeon, Clinica Alemania de Santiago, Santiago	Chile	Team Member
Ito, Manabu	Consultant Spinal surgeon, The University of Tokyo Hospital, Tokyo	Japan	Team Member
Mowforth, Oliver	Orthopaedic surgeon, Department of Orthopaedic Surgery, National Hospital Organization Hokkaido Medical Center, Sapporo	Japan	Team Member
Tripathi, Manjul	Scientist & Neurosurgery resident, Myelopathy.org, International Charity for Degenerative Cervical Myelopathy	United Kingdom	Team Member
Granit, Molliqaj	Neurosurgeon, Dept. of Neurosurgery, PGIMER, Chandigarh	India	Team Member
Wilson, Jefferson	Neurosurgeon, Division of Neurosurgery, Geneva University Hospitals, University of Geneva	Switzerland	Team Member
	Neurosurgeon, Division of Neurosurgery, Department of Surgery, University of Toronto, Toronto, ON	Canada	Team Member
Perioperative—Incubator			
Last and first name	Affiliation		Role
Kotter, Mark	Neurosurgeon, Department of Neurosurgery, University of Cambridge. Myelopathy.org, International Charity for Degenerative Cervical Myelopathy	United Kingdom	Chair
Kalsi-Ryan, Sukhvinder	Affiliate Scientist, KITE Toronto Rehab University Health Network. Clinic/Scientific Lead—Rocket Family Upper Extremity Clinic-Lyndhurst Site	Canada	Leadership Committee
Boerger, Timothy	Person with lived experience & Scientist. Dept. of Physical Therapy, Marquette University, Milwaukee, WI	USA	Leadership Committee
Anwar, Fahim	Consultant Rehabilitation Medicine, Cambridge University Hospital	United Kingdom	Leadership Committee
Gharooni, Aref-Ali	Scientist & Neurosurgery resident, Myelopathy.org, International Charity for Degenerative Cervical Myelopathy	United Kingdom	Leadership Committee
Kumar, Vishal	Orthopaedic surgeon, Medica Hospital Ranchi, Chandigarh	India	Leadership Committee
Mee, Harry	Academic Rehabilitation Registrar at Addenbrookes hospital	United Kingdom	Leadership Committee

(continued)

**Table 4.** (Continued)

Perioperative—Incubator			
Last and first name	Affiliation	Country	Role
Davies, Benajmin	Scientist & Neurosurgery resident, Myelopathy.org, International Charity for Degenerative Cervical Myelopathy Department of Neurosurgery, University of Cambridge	United Kingdom	AO Spine RECODE-DCM Co-PCI
Demetriades, Andreas	Consultant Neurosurgeon and Spinal Surgeon, Edinburgh	United Kingdom	Team Member
Bazán, Pedro Luís	Neurosurgeon, Hospital Italiano de La Plata	Argentina	Team Member
Treanor, Caroline	Physiotherapist in the national neurosurgical service	Ireland	Team Member
Hariharan, Ram	Consultant in Spinal Injuries at Sheffield Spinal Injuries Centre	United Kingdom	Team Member
Aung, Wunna	Consultant in Spinal Injuries at South Tees Hospital, UK	United Kingdom	Team Member
Makkar, Jeetinder	Anaesthesia and Intensive Care, Medica Hospital Ranchi, Chandigarh	India	Team Member

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