DR Barometer
Shifting the needle

DR BAROMETER PROGRAM

Communities of Practice Virtual Workshops:
Meeting Report

11 June 2020
25 July 2020

Via Zoom Teleconference

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Contents

Executive Summary

Considering the gaps in patient awareness and education of diabetic eye diseases and a number of barriers to screening and treatment services at a country level, the collaboration between healthcare providers, thought leaders and advocacy institutions to inform practice and policy as it relates to the vision health of people with diabetes became essential. DR Barometer Community of Practice is a platform for highly motivated people working collaboratively to create and/or share knowledge, and drive evidence to actions that address gaps in diabetes patient care. Knowledge mobilization is not just about disseminating information. It is about engagement, end-user participation and attention to the impact on tangible practice and policy change. The biggest role of DR Barometer Community of Practice in this outstanding global initiative is to not only disseminate knowledge asset generated from CoP and but also facilitate the uptake of existing evidence in the context of its use.

To function a successful CoP, members need to participate in exchanges of personal or professional knowledge and/or experience directly or indirectly related to diabetes-related vision complications by contributing knowledge, materials and information; define and contribute to pilot projects that address barriers in relation to the topic of focus; outreach and link to colleagues in the field to add strength to the community; support in dissemination of CoP activities to professional networks and suggest ways to improve of the value and impact of the CoP.

The DR Barometer CoP virtual workshops unveiled opportunities and practice challenges associated with three focal areas of our attention: patient education and empowerment, guidelines and protocols and coordinated care. Although mapping and increasing the impact of existing DR program resources should be an ongoing process, there have been a number of excellent ideas generated from the workshops which could guide us moving forward:

Ideas and innovations

1. **Resource repository**

   To share resources and best practices garnered over time and support the application of knowledge and evidence in the local context is one of the most important mission of DR Barometer CoP. As the digital workplace of DR Barometer CoP has been launched, the next step is to provide trainings for CoP members to use the tool for collecting decentralized resources such as recommendations/guidelines and sharing those resources with the community.

2. **DR Barometer Study findings**

   The DR Barometer study has shone a spotlight on the status of prevention, assessment and treatment of diabetic eye disease (DED), as well as the real-life experiences of people living with the condition and the perspectives of the clinicians they interact with in 41 countries. The global findings and series of country reports could provide important insights and evidence that can be used to inform and shape policies, programmes and services that can positively impact the vision health of adults with diabetes.

   Despite the volumes of research evidence available, relatively little is disseminated and taken up or applied by health clinicians and policy decision makers. The next step is to continue engaging members within the CoP to disseminate DR evidence and facilitate the uptake of evidence in the

context of its use. CoP members are encouraged to fully immersed in digital workplace to post productive inquires, seek for implementation supports and demonstrate successful practice of using of the DR study evidence in the local context.

Starting November, key messages obtained from DR Barometer 1.0 study will be forwarded to CoP members through digital workplace in an easy-to-share format such as infographic and social media content. Members are required to adapt the information and disseminate through their local networks to amplify the reach of evidence and stimulate actions.

3. Massive Open Online Courses (MOOCs) for Patient Education

The ability for patients to understand disease-related information and to feel empowered to make decisions based on that information is vital to their health and well–being.

A free Massive Open Online Course (MOOC) for patients living with diabetes is envisaged to increase knowledge of, attitudes towards, and adherence to diabetes-related vision health care recommendations. The idea of offering MOOCs for patients living with diabetes could be considered as a deliverable on country/region level for CoP members.

4. Model for coordinated care

The WHO Guidelines on Integrated Care for Older People (ICOPE) propose evidence-based recommendations for health care professionals to prevent, slow or reverse declines in the physical and mental capacities of older people.

Exploring how vision care can be embedded into the WHO Integrated Care for Older People (ICOPE) model could be an opportunity. IFA on be half of DR Barometer will reach out to Mr Eduardo Sosa-Tinoco for connection with WHO working groups on ICOPE to discuss the possibility of integrating the eye care into ICOPE Model or adapting the ICOPE to provide guidelines for coordinated care in vision health.

5. Empowering patient associations in Latin America

In consideration of challenges in consolidating advocacy voices of patient organizations to push for policy and practice change faced by CoP members in Latin American, an upskill training is required to provide hands-on experience in the process of generating collective advocacy efforts and responding to region specific issues as identified by members.

6. Questions for consideration

8 questions identified by *Dr Juan Carlos Silva* for CoP members to explore further and deliver outcomes such as editorials, articles to inform advocacy efforts were outlined below.

How to communicate more effectively to increasing community awareness on the importance of diabetes care and DR screening?
What is the effect on establishing a counselling service on DR for patients at the clinics for diabetics in improving patients uptake of screening and treatment?
What is the effect of increasing ownership and perceived responsibility on health care providers diabetologists, internist by integrating DR into diabetes care protocols and by

improving physicians' competences and skills in identifying and referring DR to the ophthalmologist
What is the effect of telemedicine in increasing screening coverage in the population?
How can services for DR be sustainably financed to reduce out of the pocket payments?
What would be the effect of providing transportation to diabetic patients for their annual screening and any treatment?
What would be the effect of training ophthalmologists working at district hospitals in the diagnosis or treatment of DR and / or clinically significant DME (education and certification on DME, angiogenesis and anti-VEGF therapies) to increases access to services.
What would be the effect to equip district hospitals to make more complex treatments in increasing access to screening and treatment for DR?

Introduction

To improve understanding of the complex global, regional and specific country issues giving rise to increased prevalence of Diabetic Retinopathy (DR) and Diabetic Macular Edema (DME), the International Federation on Ageing (IFA), the International Agency for the Prevention of Blindness (IAPB), the International Diabetes Federation (IDF) and Bayer AG joined forces in a unique partnership to conduct a comprehensive, two-phase, multi-country study in 41 countries in 2017. This ground-breaking study shone a light on the status of prevention, assessment, and treatment of diabetic eye disease (DED).

The global report and series of country reports synthesize and describe responses from over 7,000 participants comprising adults with diabetes and health care professionals. They provide important insights that are being used to inform and shape policies, programmes, and services to positively impact the vision health of adults with diabetes.

The DR Barometer Program borne from this study is established as an overarching platform of knowledge, productive enquiry, and solution driven actions at the country level.

In 2018, the DR Barometer Program enthusiastically welcomed the Vision Academy (comprising ophthalmic specialists with a forum to share existing skills and knowledge, build best practice, and lead the wider community in the drive towards optimized, compassionate patient care) as a program partner exemplifying the commitment and investment from the clinical community.

In the same year regional workshops were convened in Latin American (Mexico) and Europe (Milan, Italy) bringing together a diverse group of experts including advocates for diabetes, vision health, and older persons, ophthalmologists, diabetes specialists, primary care providers, public health professionals, and industry. Barriers that impacted the vision health of adults with diabetes were intensely explored and tested in the workshops for their relevance across and within countries.

To optimise influence and lessons learned and to improve the vision health of adults with diabetes, the DR Barometer Program has an agreed framework through three main enquiries: patient education and empowerment; guidelines and protocols; and coordinated care which form the structure of the community of practice (CoP).

The DR Barometer CoP Workshops

To formally launch the DR Barometer Community of Practice, two virtual workshops were convened in July 2020 comprising 18 delegates from 11 countries (Argentina, Brazil, Canada, Colombia, Greece, Mexico, Portugal, Spain, Turkey, the United Kingdom and the United States). Experts and thought leaders in the fields of ophthalmology, diabetology, primary care, geriatric care, public health, diabetes advocacy and vision health advocacy gathered at the workshops to discuss evidence, practical challenges, solutions and strategies on the three focal areas: patient education and empowerment; guidelines and protocols; and coordinated care.

Dr David Phipps, Executive Director of Research and Innovation Services at York University, Canada facilitated the workshops with describing the knowledge mobilising framework and the guidelines for promoting the uptake of evidence in the context of its use.

Goal and Objectives

The primary goal of the DR Barometer CoP Workshops was to advance the understanding of driving evidence to action to improve vision health of people with diabetes through formalising the process and outcomes of associated with members of the community.

Five objectives provide a roadmap to the development of a functioning Community of Practice that delivers tangible outcomes.

1. To prepare delegates in advance of the workshop through identifying and disseminating specific reading and practice workshop material
2. To create a learning forum for delegates to achieve essential knowledge and skills to fully participate in the CoP
3. To train delegates in the virtual CoP tools to support the exchange and access to CoP resources
4. To build consensus on the process of optimising the uptake of evidence toward new knowledge and / advancing understanding / solution on the three focal areas
5. To review and formalise the Charter which outlines the roles and responsibilities of members of CoP

Workshop Presentations

The DR Barometer Journey – Ms Michelle Sylvanowicz

To address the complexities of optimizing eye health in people living with diabetes around the globe, the Diabetic Retinopathy (DR) Barometer Study sought in broad terms to assess the awareness of DED and access and barriers to diabetes management, including screening for DED and timely treatment. Findings in 41 countries were stark and disturbing in terms of the gaps in patient education, guidelines and protocols and coordinated care. Workshops in Milan and Mexico bringing together key stakeholder groups refined the focus which informed to development of Communities of Practice (CoP) that aim to drive actions at a country level.

Facilitating the Uptake of Research Evidence into Policy and Practice – Dr David Phipps

There is science behind evidence-informed policy and practice. It is built on the conceptual model and execution of Model of Knowledge Mobilization and the Promotion Action on Research Implementation in Health Services (PARIHS) framework and depicted through the pathway of transferring evidence into impact on policy and clinical practice at local, national and global level. Through CoPs members can exchange information therein moving the evidence down stream to facilitate its uptake in the local context.

Patient Education and Empowerment – Dr Manual Serrano-Gil

The issues of “evidence to actions” around patient education and empowerment is best portrayed through four key questions: What is the evidence; Where are the gaps; Who needs to receive the evidence; and What format/timing do they want.

The Chronic Care Model and implementation of Self-Management Support (SMS) strategies by healthcare providers and expert patients is a possible pathway to increase awareness of

DED. Expert patients (educators) have significant knowledge of the disease and treatment, as well as self-management skills. Online platforms for peer support and to facilitate the dissemination of evidence in the context of COVID pandemic are being used successfully in the pandemic and as such could have transferability.

Barriers to patient education and empowerment include lack of personalized information; lack of patient education skills for health professionals; inadequate evaluation of public health awareness campaigns related to DED; and a lack of digital literacy for health professionals, patients and other stakeholders. Evidence needs to be disseminated to health professionals, patients, public and private institutions, general public and industry

Guidelines and Protocols – Prof. Sehnaz Karadeniz

Two questions shape the conversation as to the evidence for guidelines and protocols and where are the evidence gaps? Improved implementation of guidelines and protocols would yield substantial visual and financial savings however adherence to diabetes guidelines by HCPs do not draw enough attention in the literature and is suboptimal at best in many European countries.

Physicians' lack of knowledge and patients' lack of awareness account for about 70% of non-adherence to evidence-based guidelines. Furthermore there are policy related barriers to integrating diabetes evidence into practice and barriers related to HCPs and patient with diabetes to integrating diabetes evidence into practice.

What is the Vision Academy? – Dr Francisco Rodriguez

That Vision Academy (VA) is a global collaboration of experts with the goal of seeking to provide guidance for best practice in patient-centric care, disease insights, diagnosis and assessment and treatment in ophthalmology. Most recently Vision Academy (VA) developed published guidance for anti-VEGF intravitreal injections during the COVID-19 pandemic which included considerations to avoid contamination and treating patients in a limited-resource environment, prioritizing patients according to medical need: assessing the risks and benefits, reducing exposure during the patient visit, and ways to reassure patients. The Academy's knowledge assets and guidance are shared via publications, viewpoints, presentations and educational slide decks and website.

Coordinated Care – Dr Antonio Sarria-Santamera

Four key elements are required for coordinated care, namely, patients first, systemic improvement, micro-systems and health information systems. Despite an extensive knowledge base pursuing coordinated care has many barriers including poorly integrated care from multiple providers, failures of communication, inadequate sharing of clinical information, poor reconciliation of medicines, duplication of investigations and avoidable healthcare use.

Discussions

Patient Education and Empowerment

1. The role of physician/clinician in patient education

   Up-to-date relevant and credible information is central to patient care as well as compliance. While physicians are often viewed as the most credible and trusted source of knowledge the strict time-limited appointment scheduling means there is little additional time for knowledge sharing. This is not to say that physicians do not answer patient questions, they certainly do, however there is a need to create 'a patient knowledge expert' who is equally trusted.

   While resources such as pre-printed information or online resources can be made available at the clinic or pre-clinic appointment the essential messages from non-medical professionals to the patient and their family related to self-management of their condition should be consistent with the information perceived from medical doctors. Positively actionable information is also the key step toward adherence and persistence.

2. The patient as an educator

   Health care professionals were viewed as the most trusted source of information about diabetes, yet health organisations, the health educator, the pharmacist, and family also play important roles with respect to education. The DR Barometer showed that limited access to patient education on DR and DME and very few individuals with diabetes reported ongoing contact with diabetes educators. There is an opportunity to change the trajectory of this problem.

   As an example the Turkish Diabetes Foundation has developed a peer education program to train peer educators for providing diabetes educations. Peer educators comprising retired pharmacists, retired teachers, retired nurses received training on communication skills and were informed of the scope and limits of their activities in peer education.

   There is also value in exploring therapeutic areas beyond diabetes and ophthalmology with respect to models of patients as health coaches and ambassadors which have proved successful within patient organisations in the heart and lung diseases.

3. Using media in patient education

   Media plays a crucial role in disseminating health information and increasing awareness about diabetic eye disease (DED). Rapid and innovative advances in digital media also offer opportunities for health education, especially in a time of pandemic.

   For example Retina Brasil is featuring live events on YouTube to educate and encourage patients to take care of vision health during the pandemic; and the Turkish Diabetes Foundation have an Instagram TV program on diabetes 2 days per week with physicians, diabetes nurses, dieticians and patients to provide reliable information and ask questions.

Guidelines and Protocols

The DR Barometer study underlined a serious gap in access to, or application of, protocols and guidelines across all types of providers. Seeking and implementing clinical guidelines requires the cooperation and involvement of entire healthcare team rather than merely clinicians.

Teamwork helps to ensure that representatives from different aspects of the patient care process will develop commitment to the implementation effort and contribute their respective content areas of expertise to that process.

Adaptation of guidelines to suit the context in which it is intended to be applied is a key step in the implementation process. Without taking the regional variations in priorities and capacity in clinical practice into account, certain interventions recommended in evidence-based guidelines may not feasible under local conditions. To help increase the application of clinical guidelines, it would be necessary for health care professionals to learn about suggested pathway to implementation and barriers and possible solutions to overcome them.

In response to the findings of the DR Barometer, the Vision Academy is now considering a workstream known as "Keep It Short and Simple" aimed at distilling best-practice guidelines to support earlier diagnosis, improved referral and appropriate treatment for patients with DR.

Coordinated Care

Patients, together with their caregivers and family members, constitute a unique group of stakeholders. They are the ultimate recipients of care and services; their perspectives, thoughts and concerns are therefore particularly valuable to the development and implementation of patient-centred integrated healthcare.

However current interventions have largely focused on improving coordination at the provider level. It is necessary to understand the care coordination from the perspectives of patients to inform the coordinated care pathway to improved patient care.

Conclusion

The official launch of the DR Community of Practice coinciding with the virtual workshops was seen to be pivotal in its later productivity. In addition to the Chair and Expert Advisory for each CoP, delegates involved in the virtual sessions advanced the understanding of the framework and process driving evidence to action to improve the vision health of people with diabetes and contributed to the discussion around evidence gaps and practical challenges, solutions and strategies that could work in different contexts.

The DR Barometer Community of Practice was formally established with three opportunity areas identified (patient education, guidelines and protocols and coordinated care) which set the priorities for further work. The findings from DR Barometer study have provided important insights that can inform and shape policies, programmes, and services to positively impact the vision health of adults with diabetes but they are yet fully used. Maximizing the impact derived from evidence is a core goal of the DR Barometer Program. The development of DR Barometer Community and CoP has successfully engaged multidisciplinary stakeholders. The opportunity now is to work in a collective effort to proceed from sharing the research evidence to facilitating the use and uptake of evidence in local context.

Responding to the five questions (What is the evidence? Where are the gaps? Who needs to receive the evidence? What format/timing do they want? Actions needed to facilitate the uptake of evidence in the context of its use) raised under each focal areas has helped CoP members to think through next

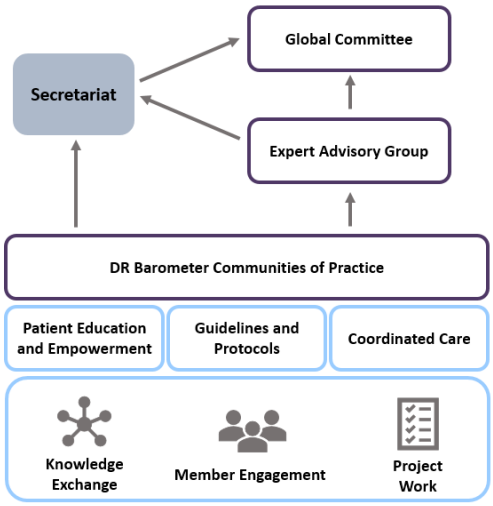
steps that can be taken on country and regional level to align with the strategic imperatives of the DR Barometer program.

The DR Barometer CoP Workshops will continue to carried on as a forum for members to share knowledge and good practices as well as to address specific productive inquiries toward new knowledge and solution to improve education, screening, treatment and care of adults living with diabetic eye disease. Knowledge assets and good practices shared by expert members in the workshops can be further leveraged and localized to help build the capacity of stakeholders in the regions who are working to inform policy and practice in vision health as it relates to diabetes.

Feedback summary

Working Well
Planning and execution of the workshops
• Good review of evidence from DR Barometer study, references, anecdotal information, and regional practices • Workshops are dynamic, interactive, well planned and conducted • Help to reflect on current evidence and issues and inform future actions • Moderation of workshops, respecting scheduled times, structure of the discussion topics, and promotion of participation of all
Learning and sharing
• Learning from colleagues particularly the challenges of advocacy in Latin America • Gaining a deeper understanding of difficulties that clinicians experience in Latin America • Discussions were inspiring with possible strategies for solutions outlined
Summary Workshops provided the opportunity for sharing evidence and practical challenges, identifying needs, and discussing solutions and strategies that could work in different contexts.
Improvements
• Greater regional diversity and representation is required (e.g. Brazilian doctors and patient associations) to enable more focussed discussions at a country level • Critical to keep an ongoing dialogue for the collective construction of inquiries toward new knowledge and solution to address practical challenges as identified by members • Expected outputs and outcomes of sessions beyond information exchange needs clarification otherwise there is a risk that some people may disconnect. Deliverables, deadlines, roles, responsibilities, and the realistic nature of achieving outputs must be discussed and agreed upon • Governance structure of the DR Program needs to be clear, for example, who are the leaders. Declarations of conflicts of interest must be documented
Responses • Tools for ongoing dialogue: DR Barometer will utilize the CoP digital workplace to promote ongoing knowledge exchange, interaction and communication between CoP members and Chairs and Expert Advisors • Output of the CoP workshop: Participants have more comprehensive understanding of role of DR CoP in driving evidence to action; Participants achieve agreement on the answers to key productive inquiries through formalised the process of CoP • Governance structure of DR Barometer:

DR Barometer Program is funded by Bayer and built on a credible governance structure: a Global Advisory Committee comprising IFA, IDF, IAPB, Byer and Vision Academy oversee and set the strategic direction of the Program; management, administration and overall monitoring of the Program is undertaken by the Secretariat (led by the IFA).



Central to the Program is the Community of practice that seek knowledge, exchanges knowledge and creates *knowledge assets* to drive actions in three focal areas: patient education and empowerment, guidelines and protocols and coordinated care.

CoP is led by Chairs and Expert Advisors who guides the question(s) that engage the community, gaining perspectives from its members in an iterative process resulting in the creation of new knowledge asset which can is then translated into various tools for advocacy at a country level.

Outstanding Questions

Purpose

- What is the expected output and outcomes of the group?
- What is the role and responsibility of each members in the CoP?
- What is the timing and plan for CoP members to contribute?
- What are the main and secondary objectives of the project?
- Which are the ideas for integrated working between participants and for integrating the multiples potential projects in several countries with a unique vision?
- What should be our tangible goals previous to the face to face meeting in Croatia?
- How should we manage and what skills should we acquire for managing common restraints in Latin America for project implementation: human and money resources, time, leadership searching and training and others?
- Is this DR Barometer project or initiative linked or intended to be linked to other existing global strategies promoted by WHO, or the United Nations?

Responses

- Goal of DR Barometer Program: To improve vision health outcomes for adults with diabetes
- Objectives of DR Barometer Program: Mobilize action at the country and regional levels; Enhance education and engagement of adults with diabetes and their families about diabetes-related vision complications including risks, prevention, screening, and treatment options; Promote awareness and uptake of guidelines and protocols for preventing, screening, and treating diabetes-related vision complications among

healthcare professionals including primary care, diabetes specialists, and ophthalmologists; influence healthcare professionals and organizations to use coordinated, patient-centered, 'systems level' approaches to preventing and managing diabetes-related vision complications

- Role of Community of Practice: disseminate knowledge asset generated from CoP and facilitate the uptake of existing evidence in the context of its use
- Role of CoP members: participate in exchanges of personal or professional knowledge and/or experience directly or indirectly related to diabetes-related vision complications by contributing knowledge, materials and information; define and contribute to pilot projects that address barriers in relation to the topic of focus; outreach and link to colleagues in the field to add strength to the community; support in dissemination of CoP activities to professional networks and suggest ways to improve of the value and impact of the CoP

Appendix 1. Attendees and Bios

Prof Arturo Alezzandrini

President, Argentine Society of Ophthalmology

Arturo Alezzandrini is a professor at Medicine at Faculty of Medicine, University of Buenos Aires (UBA) and was trained as a doctor with a specialty in Ophthalmology. He is the President of the Argentine Society of Ophthalmology and the Pan American Retina and Vitreous Society and the Medical Director of Ophthalmology at High Complexity Ophthalmological Institute.

He is the author and co-author of 22 books, 5 consensus on Retinal Diseases, 67 articles published in magazines, 38 posters presented at conferences, 24 scientific videos, 26 clinical research papers and has been a speaker at national and international conferences.

Dr Florencia Aranguren

Professor, University of Buenos Aires

Dr Aranguren is a professor of diabetes in the medical career at the University of Buenos Aires, the UCES University, and the USAL. She works as a clinician at the Diabetes Division of José de San Martín Hospital.

She actively participates in the Nephropathy Committee of the Argentina Diabetes Society and the Cardiometabolism Council of the Argentina Cardiology Society, of which he is a full member and adherent advisor, respectively. He is also a part of the Diabetes Committee of the Argentina Society of Nephrology. She was a member of the steering commission at the Argentina Diabetes Society in 2018.

Ms Maria Julia Araujo

President, Retina Brasil

Ms Araujo has been working for people with retinal diseases since 1999.

Dr Teresa Caldas de Almeida

Head Of Unit of Health Promotion, National Health Institute Doutor Ricardo Jorge

Medical Doctor by the Faculdade de Ciências Médicas da Universidade Nova de Lisboa in 1980. Specialist in Public Health, with competence in Health Services Management by the Portuguese Medical Association (Ordem dos Médicos).

Since July 2016, she has been Coordinator of the Health Promotion Unit of the Department of Health Promotion and Prevention of Non-communicable Diseases (DPS) of the National Institute of Health,

Doutor Ricardo Jorge. She currently has two main tasks: Coordinate the National Health Plan evaluation team and coordinate a skills training program for Health Impact assessment, with WHO collaboration.

From October 2012 to July 2016 she assumed the position of Executive Director of the Country Division of Alentejo Central for Primary Health Care Units.

Collaborated with the Division of Sexual, Reproductive, Children and Youth Health of the General Directorate of Health from September 2011 to October 2012.

From 2006 to 2011 she was Medical Advisor at the Office of The High Commissioner for Health.

From 2002 to 2006 she was as Deputy Coordinator of the Regional Center for Public Health of Alentejo (CRSPA) and Health Authority Deputy for the Health Region of Alentejo.

She was, from 1994 to 2002, Health Authority in the Municipality of Mora and member of the Agency of Contract of Health Care Services of the Alentejo Region.

She was also in charge of the Coordination and Management of Health Programs and the Quality Commission of the Central Alentejo Region - Évora Health Sub-region.

From 1988 to 1994 she was a Public Health Doctor at the Mora Health Center and advisor to the Directing Board of the Health Sub-region of Évora.

Dr Jane Barratt

Secretary General, International Federation on Ageing

Jane M Barratt, Ph.D. is the Secretary General, International Federation on Ageing (IFA) an international non-government organisation with general consultative status with the United Nations and its agencies including formal relations with the World Health Organisation (WHO).

Representing over 75 million older people through the membership of the IFA, Jane has direct responsibility for the corporation's global operational performance, quality and strategic implementation, and business development. This includes leadership at the United Nations Economic and Social Council in New York, Geneva and Vienna and the WHO.

Among her many current positions Jane is a Member of Vision Academy, Director, Baycrest Health Sciences and Chair of the Education Advisory Committee, Associate Scientist, Sinai Health System, Member, Global Committee for the DR Barometer Program, and Member of the International Council for Adult Immunisation.

Dr Jason Baker

Assistant Professor, Weill Cornell Medical Center

Jason C. Baker, MD, is Assistant Professor of Clinical Medicine and Attending Endocrinologist at NewYork-Presbyterian/Weill Cornell Medical Center in New York. He earned his medical degree at Emory University in Atlanta, Georgia, and completed an internship and residency in Internal Medicine at New York University Medical Center/Bellevue Hospital Center in New York.

Dr. Baker completed a fellowship in Endocrinology, Diabetes, and Metabolism at Montefiore Medical Center/Albert Einstein College of Medicine in Bronx, New York.

Dr. Baker is also a patient with type 1 diabetes, having been diagnosed in medical school at the age of 24. Dr. Baker's interests include disease management through education and lifestyle interventions, prevention of type 1 diabetes, and the impact of diabetes on international health. He is the co-founder and Medical Director of the nonprofit organization Marjorie's Fund, a global initiative for type 1 diabetes dedicated to diabetes education, health care access, and economic empowerment for type 1 diabetes living in resource-poor settings. Dr. Baker is involved in numerous global health efforts in diabetes, including projects in Uganda, Rwanda and Egypt, and in 2012, he was named International Endocrinologist of the Year by the Metro New York Association of Diabetes Educators. He was also included in the October 2013 "People to Know" edition of Diabetes Forecast magazine, received the Humanitarian Award from the Diabetes Research Institute in 2014, was a dLife Diabetes Champion in 2015, and is a 2018 Bakken Invitation Award Honoree.

Dr. Baker is a contributing editor to the online health communities dLife, EverydayHealth, and Healthline. Dr. Baker's publications include the diabetes chapter in Public Health in the 21st Century; the foreword to The Sweet Life, a cookbook for people with type 1 diabetes by celebrity chef Sam Talbot; a contribution to Beverly Adler's book My Sweet Life: Successful Men With Diabetes; and a contribution to Susan Weiner's book The Complete Diabetes Organizer.

Ms Marina Leite Brandão

Communication Specialist, Retina Brasil

Ms Leite Brandão works at the Retina Brasil since 2018.

Prof Sehnaz Karadeniz

Professor, Medical Faculty of Demiroglu Bilim University

Dr. Karadeniz has been actively involved in the field of diabetes for the past 20 years in a series of medical, scientific and social projects both at national and international levels.

Currently she is a Teaching Faculty at the Ophthalmology Dept. of Medical Faculty of Demiroglu Bilim University and also working as an ophthalmologist at the Ophthalmology Dept. of the Istanbul Florence Nightingale Hospital.

She is the Founding Member and the Member of the Board of the Turkish Diabetes Foundation (TURKDIAB). She serves also as the President of the Living with Diabetes Association, a nationwide patients' organisation, since 2019. She was also a Council Member of EASD for the term 2014-2017.

Dr. Karadeniz joined the board of International Diabetes Federation European Region (IDF Europe) in 2007, and also served as the Chair of IDF European Region from Dec 2015 to Dec 2019.

Prof Carlos Alberto Matinho Marques Neves
Professor, Lisbon School of Medicine

Carlos Marques Neves is a member of the Portuguese Medical Association (professional licence no. 31093) since 1987 and of the Speciality College of Ophthalmology since 1994. He published 51 articles in journals and has 1 book.

He is currently the Clinical Director of ALM – Serviços de Oftalmologia Médica e Cirúrgica, a position held since 2007, and Hospital Assistant of the Ophthalmology Service in the Hospital de Santa Maria of the Centro Hospitalar Lisboa Norte (HSM/CHLN). More recently, he was appointed Director of the Study Centre for the Eye Sciences (2014) and Director of the University Clinic of Ophthalmology of the Faculty of Medicine, University of Lisbon (FMUL) (2017).

Dr David Phipps
Executive Director, York University Research & Innovation Services

Dr. Phipps received his Ph.D. in Immunology from Queen's University (Kingston, Ontario) and undertook post-doctoral studies in HIV research at the University Health Network (Toronto).

Dr. Phipps is the Executive Director of Research & Innovation Services at York University where he manages all research grants and contracts including and knowledge and technology transfer. In this capacity he leads York's Knowledge Mobilization Unit that provides services to researchers, community organizations and government agencies who wish to use policy and practice related research to inform public policy and professional practice. In addition to leading the award-winning Knowledge Mobilization Unite, Dr. Phipps is also identified the most influential knowledge mobilizer in Canada.

He also leads Research Impact Canada, Canada's knowledge mobilization network including 17 universities from across Canada plus the University of Brighton (UK). In 2019 he was invited to facilitate workshops in UK, Spain, Denmark, New Zealand, Australia and the US as well as at universities across Canada. He was the international panel member for the NZ Ministry of Education's review of the NZ Performance Based Research Fund and was a member of the External Advisory Group for implementation of the NZ Health Research Strategy.

Dr Francisco J. Rodriguez
Chair, Fundacion Oftalmologica Nacional

Francisco J. Rodríguez is the chair of the Fundación Oftalmológica Nacional and Professor of Ophthalmology at the Universidad del Rosario School of Medicine in Bogotá, Colombia. He received his medical degree from the Universidad del Rosario School of Medicine and carried out his ophthalmology residency at the Fundación Oftalmológica Nacional. Dr. Rodríguez then completed a vitreoretinal surgical fellowship at the Jules Stein Eye Institute, UCLA, a medical retina fellowship at the Manhattan Eye, Ear and Throat Hospital, and electrophysiology / hereditary retinal diseases fellowship at the Bascom Palmer Eye Institute, University of Miami Leonard M. Miller School of Medicine.

Dr. Rodríguez has participated as principal investigator in several clinical trials for AMD, diabetic macular edema and retinal vein occlusion. He is member of the AAO, Macula Society, Club Jules Gonin, ASRS, Euretina, Panamerican Association of Ophthalmology. He has more than 80 publications in national and international peer-reviewed journals and has authored several chapters in retina books.

Dr. Rodríguez's research interests include diabetic retinopathy, AMD, retinal vein occlusion, inflammatory diseases of the retina and choroid, retinal detachment, management of ocular trauma and retinal imaging.

Dr Juan Gonzalo Sanchez

Academic Director, Intituto Nacional de investigacion en oftalmologia

Juan Gonzalo Sanchez, ophthalmologist and surgeon graduated from the University CES (Medellin, Colombia); 21 years of clinical experience, Supra-specialist in diseases of the retina and vitreoretinal surgery of the Ophthalmological Clinic Center Caracas and Foundation for Research in Ophthalmology Arevalo Coutiño (Caracas, Venezuela). He is the past president of the Colombian Association of Retina and Vitreous - ACOREV 2017 - 2019. He is a founding member of the national group "Colombian Coalition for the Treatment of Diabetes". He is part of the Board of the Pan American Society of Retina and Vitreous - SPRV since 2018. Involved in numerous research projects related to Retinal Diseases and principal investigator in several international clinical trials. He is currently a professor of the Department of Retina at the University of Antioquia and the University CES; Scientific Director of the National Institute of Research in Ophthalmology INIO-CLOFAN (Medellin Colombia).

Ms Anna Sangster

Program Manger, International Federation on Ageing

Anna Sangster joined the IFA team as a Project Officer in February 2019 and was promoted to Program Manger in 2020, leading the DR Barometer, the Global Age-friendly Cities and Communities initiative, and IFA Brain Health projects.

Anna graduated from the Dalla Lana School of Public Health with a Master's in Public Health specializing in Behavioural Health Sciences and Addiction Studies. Anna also holds an Honours Bachelor of Science from the University of Toronto where she double majored in Biological Anthropology and Psychology. It was during her undergraduate degree that Anna's interest and passion in the social determinants of health and health equity became a driving force for her future academic and career aspirations.

Anna has experience in project development, management and stakeholder engagement. Anna's work has allowed her to participate in innovative projects which are proactive in advocacy to improve the lives of older persons around the world.

Dr Antonio Sarria-Santamera

Associate Professor, Nazarbayev University School of Medicine

Dr. Antonio Sarria-Santamera is a physician dedicated to improving population health, through understanding what works in Medicine and developing high-performing health delivery systems.

His research focuses primarily to provide science-based insights to strengthen health care systems, improving quality and performance, with particular interest in Non-Communicable Conditions (NCD) because of the impact that those conditions pose to patients, health systems and society at large. Antonio has contributed to expand our knowledge regarding how we approach the management of those conditions looking at ways to make health care better, including the use of Information and Communication Technologies, as well as using population based data platforms for improving patient care, with a very special emphasis in strengthening Primary Care. He has published widely in this field and has led several national and EU projects. To highlight the EUPRIMECARE project, whose objectives were to assess quality and costs of Primary Care systems across Europe, and CHRODIS+, an EU project aimed to tackle NCD through the implementation of innovative practices and policies across Europe. His work in the area of implementation is based on the principle that for sustainable quality improvement is essential to understand the influence of the local organizational culture, which determines how individuals learn, interconnect, self-organize, and co-evolve with their environment, usually in non-linear dynamic ways.

Dr Manuel Serrano-Gil

Director of Internal Medicine, Health Murcia System

Dr Serrano is an Internal Medicine doctor, with 20 years experience in Patient Empowerment, pioneer in Spain with the introduction of the term “expert patient”. He has been involved in european funded research projects with more than 20 institutions in the field of Self Managament Support and Diabetes, and has published more than 30 articles in peer reviewed journals.

He received his training at the University of Pittsbugh (1999-2001); Master in Clinical Research and at the University of Stanford (2006), Master Trainer for the Chronic Disease Self Management Program.

Dr Maximiliano Smietniansky

Physician, Hospital Italiano de Buenos Aires

Dr Smietniansky is a specialist of Internal Medicine and Geriatric. He has been the Coordinator of Preoperative and Prechemotherapy Assessment in the Elderly and the Head of Preoperative Service. He is also the member of Spain Geriatric Society and founding member of ERAS LATAM.

His research interest focus on elderly and cancer, elderly and surgery, preoperative and prechemotherapy optimization and prehabilitation of the elderly, disease management for optimization of the elderly prior procedures (Arterial hypertension, Diabetes, Pulmonary, etc.)

Dr Juan Carlos Silva

Regional Advisor in Eye Health, Pan American Health Organization – WHO

After training in ophthalmology in Colombia Dr. Silva got a Master in Public Health (MPH) at Johns Hopkins School of Public Health. He has been working as the eye care regional adviser for Latin America and the Caribbean at the Pan American Health Organization, regional office of the World Health Organization since 1991. Dr. Silva devotes most time doing program's situation analysis and working closely with country teams in planning and developing eye care programs. He has over 50 publications in peer review journals.

Dr Juan Camilo Sanchez Thorin

Vice Director, Asociación Colombiana de Diabetes

Dr. Sánchez-Thorin trained in ophthalmology at the Fundación Oftalmológica Nacional in Bogotá, Colombia and University of South Florida in Tampa, Forida, U.S. He has devoted his clinical practice since 1996 largely to the management of patients with diabetic eye disease. Dr. Sánchez-Thorin has various publications including surgical techinque descriptions, clinical trial quality assessments, meta-analysis, epidemiologic and pharmacoeconomic studies published in peer-reviewed journals as Ophthalmology, British Journal of Ophthalmology, American Journal of Ophthalmology, Asia-Pacific Journal of Ophthalmology among others. Dr. Sánchez-Thorin was the guest editor for the " Ophthalmic Complications of Diabetes Mellitus " issue for International Ophthalmology Clinics a few years ago. He practices ophthalmology at the Fundación Santa Fe de Bogotá and the Asociación Colombiana de Diabetes in Bogotá, Colombia and has been a researcher, advisor and guest speaker for Novartis, Merck and Novonordisk.

Mr Eduardo Sosa-Tinoco

Specialist Physician, National Institute of Geriatrics (Mexico)

Eduardo Sosa-Tinoco earned a Master in Public Health and Aging. He is a specialist in Geriatrics and Internal Medicine and works as a Teaching and Outreach Direction at the National Institute of Geriatrics (Mexico). His main topics of interest are education and practice based on the WHO healthy aging framework, long-term care, disabilities, multimorbidity and the Mexican legal framework related to aging.

Dr David Wong

Associate Professor, University of Toronto

Dr. David Wong is currently an Associate Professor at the University of Toronto in Ontario, Canada, specializing in retina and vitreous surgery. He is on staff at St. Michael's Hospital, Oakville-Trafalgar Memorial Hospital and Trillium Health Centre in Ontario, and is Ophthalmologist-in-Chief at St. Michael's Hospital. He is a previous honors graduate from the University of Toronto's medical doctorate program and completed his residency in ophthalmology at the

University of Toronto, followed by fellowships in Toronto and at Columbia University in New York, USA.

Dr. Wong is a member of the Canadian Ophthalmological Society, AAO, the American Society of Retina Specialists, and ARVO. He is also on the board of directors for the 20/20: NSERC Ophthalmic Materials Network, and consultant to several companies in industry.

Dr. Wong has been awarded numerous local and international awards, including the Senior Honor Award from the American Society of Retina Specialists. He is the past Director of the fellowship programs in the Department of Ophthalmology and Vision Sciences at the University of Toronto, and founded the national fellowship committee in the Canadian Ophthalmological Society. Dr. Wong has been a frequent invited speaker in North and South America, Asia and Europe, and has authored numerous scientific papers and book chapters in various areas of vitreoretinal diseases, including trauma, complex surgeries, new surgical techniques, AMD, RVO, and diabetes.

Dr. Wong's recent research interests include improving diabetic retinopathy surveillance to allow diagnosis during early stage disease, and he is also interested in developing new ophthalmic biomaterials.

Ms Yifan Zheng

Project Officer, International Federation on Ageing

Yifan Zheng joined the IFA team as a Project Officer in August 2019 and leads the DR Barometer and "Changing the Conversation on Adult Influenza Vaccination" project.

Before joining the IFA, Yifan completed her Master's Degree in Public Health from the University of Toronto, with a specialization in Health Promotion and Aging Across the Life Couse. There, she gained a strong understanding of health research, health promotion practice, policy advocacy, and the experiences of ageing societies.

Yifan has experience working in the ageing field within the areas of cognitive impairment and multimorbidity and has completed an internship for Shanghai CDC where she worked with the WHO Studies on Global Aging and Adult Health (SAGE) team to conduct a cross-sectional study identifying the lifestyle factors associated with cognitive function among Chinese elderly.

Appendix 2. Workshop Program

	Workshop Program
Session 1 – July 11th	
9:00	• Land acknowledgement — Dr David Phipps • Welcome and housekeeping (2 mins) —Ms Yifan Zheng • Round-table introduction of participants (8 mins)
9:15	Introduction to the DR Barometer Program, the CoP Onboarding Workshop and the purpose of this pre-workshop training (15 mins) – Dr Jane Barratt and Ms Michelle Sylvanowicz
9:30	The role of communities of practice in promoting evidence use: (20 mins) – Dr David Phipps • Theory • Purpose • Application • Conditions for success
9:50	CoP Discussion and Exchange — Patient Education and Empowerment (50 mins) • Overview of evidence and actions as it relates to patient education and empowerment (20 mins) — Dr. Manuel Serrano Gil • Informing questions about patient education and empowerment (30 mins) 1. What is the evidence? 2. Where are the gaps? 3. Who needs to receive the evidence? 4. What format/timing do they want? 5. Actions needed to facilitate the uptake of evidence in the context of its use
10:40	Q&A
10:55	Closing remarks
Session 2 – July 25th	
9:00	Reflections: questions and comments from Workshop 1 (15 mins)
9:15	CoP Discussion and Exchange — Guidelines and Protocols (50 mins)

	• Overview of evidence and actions as it relates to guidelines and protocols (20 mins) Prof Sehnaz Karadeniz and Dr Ian Pearce • Informing questions about guidelines and protocols (30 mins) 1. What is the evidence? 2. Where are the gaps? 3. Who needs to receive the evidence? 4. What format/timing do they want? 5. Actions needed to facilitate the uptake of evidence in the context of its use
10:05	CoP Discussion and Exchange — Coordinated Care (50 mins) • Overview of evidence and actions as it relates to coordinated care (20 mins) Prof David Owens and Dr Antonio Sarria-Santemera • Informing questions about coordinated care (30 mins) 1. What is the evidence? 2. Where are the gaps? 3. Who needs to receive the evidence? 4. What format/timing do they want? 5. Actions needed to facilitate the uptake of evidence in the context of its use
10:55	Breakout Group Discussion (20 mins) 1. What do I need to better implement evidence into action? 2. What is one action that I can commit to in order to better implement evidence into action?
11:15	Q&A
11:25	Closing remarks and next steps

Appendix 3. Presentation Slides (see attachment)

Appendix 4. Chat Box Summary

DR Barometer Communities of Practice Pre-workshop Training 1

Chat Box Summary

11 July 2020

Key Resources

- DR Barometer CoP Digital Workplace

Upcoming Events

- DR Barometer Communities of Practice Pre-workshop Training 2
  Saturday 25 July 2020 at 9:00 am Toronto EDT

Time to educate

- Time to treat and time to educate are a very important issues. As medicine moves to more efficiency models driven partly by payer models, there is a concept that education can be "downloaded" away from the physician and given to someone else.
- Patient empowerment skills should be seen now as a must have skill in clinical practice. What we want to see is that there is a standing position in a clinic to provide this soft care for patients on a regular basis. And the clinic could use it as an extra service to ensure patient retention perhaps, business sense

Primary educator

- Primary educator can be anyone, family physicians, the nurses, informed patients.
- It is unlikely for only doctors to communicate effectively with patients. It is the eye care team that shall take such responsibility
- Ideally information that patients perceive from a MD and a non MD should be the same. The key things to consider will be credibility and trust. So consistent language with consistent concepts is important. Otherwise patient will be confused with inconsistency and that is where credibility gets questioned.
- Same message should be delivered by from general practitioner to retina specialist but can be at different levels of medical attention.
- Retina Brasil believe that it is also important that doctors talk with their patients about the role of patient association who is also actively participating in patient education and helping them to achieve information.

Empowerment of clinician and positive messaging

- Empowerment of the clinician on how to best inform and engage to pass actionable information to the patient so they know not just their vision could be impacted but what steps they can take to avoid it. Positive messaging is important.

- There is a hybrid of “Patient Education and Empowerment” and “Guidelines and Protocols” merging to support physicians in learning this new approach and to implement it in practice.
- Instead of speaking about blindness we should be more using positive messaging and patients are also more engaged then
- language is key, empowerment and positivity has to be the basic training of how to communicate.

Social media in patient education

- Retinal Basil is making live events on YouTube to educate and encourage the patients to access information from doctor. Lives are good way to transit information to the patients at this particular time. Key messages is that physical distance is not a distance from health.
- During this COVID-19 time as the Turkish Diabetes Foundation have started Instagram TV program on diabetes 2 days a week with physicians, diabetes nurses, dieticians patients joining to provide patients an opportunity to reach reliable info and ask questions.
- Dr Florencia Aranguren as a diabetologist has formed a WhatsApp groups to put there together patients with similar characteristics of age, type of diabetes, neighborhood, etc. And this has been very useful source of information for patients and even more in pandemic times. Patients themselves also support each other a lot on social media platform. Zoom workshops were also used to for patient education during the quarantine time.

Other resources

- An example of programs to raise awareness about a health condition is the international Dementia Friends movement, which in countries like Japan has increased detection of cognitive decline in the early stages. I think something similar could be done regarding diabetes. https://www.alz.co.uk/dementia-friendly-communities/dementia-friends

DR Barometer Communities of Practice Pre-workshop Training 2

Chat Box Summary

25 July 2020

Key Resources

- DR Barometer CoP Digital Workplace

Adherence to guidelines and protocols

- Adherence to clinical practice guidelines is associated with two sine qua non issues: commitment and resources
- Adherence to clinical practice guideline has certainly been impacted by the pandemic, both by the fact that diabetics are at high risk and to the fear by patients to visit the clinic for timely treatments

Guidelines implementation

- Guidelines in the end need to be fitted to the environment one is working in and/or level of access to these guidelines
- A thorough discussion and acceptance by the clinicians with regard to the guidelines content is essential prior to implementation as well
- To help increase the application of clinical guidelines, it would be necessary for health personnel to learn about concepts, methods and practice of implementation science, in whose interdisciplinary field the barriers and possible options to overcome them should be precisely analyzed. http://www.kingsimprovementscience.org/ImpRes
- Including in the guidelines a suggested pathway for implementation would be great, which helps move towards 'integrated people centred eye care'.
- The WHO has been working on an approach that is about to start its implementation soon as part of the decade of healthy aging, that strategy is the integrated care for older people (ICOPE) that includes the evaluation of visual ability and handling. This strategy has an implementation framework and a mechanism to evaluate the process.
  https://www.who.int/ageing/publications/icope-handbook/en/
  https://www.who.int/ageing/publications/icope-framework/en/
- There is an opportunity to empower the clinicians with guidance on how to remove the jargon in their consultations and provide the soft skill to educate/empower patients in a meaningful way (e.g. connect to patients by what matters to them).

Guidelines assessment

- It's necessary to build an guidance on how to assess guidelines/protocols - a checklist of sorts - varying based on context/resource.
- The payer´s perspective with regard to successful Clinical Practice Guidelines implementation is important and there are robust evidence with regard to the cost-effectiveness of preventive and treatment interventions in diabetic eye disease.

Patient voice in coordinated care

- It's necessary to bring the patient voice to the conceptual development before implementing a Coordinated Care approach
- Empowerment of patients needs go to patients' organisations/groups or organisations that include both HCPs and Patients with Doctors. Patient organizations are able to unite patient voices and take complaints to improve access to treatment with medical institutions.
- It is necessary to empower patient associations in all countries, unite medical institutions and speak to the government to write the protocol and implement it. Then it is necessary to involve the media, digital influencers, doctors to raise awareness about the new guidelines.
- The challenge for everyone here is to map all the most active patient and medical institutions in their countries and to form a coalition, to gather the goals to be achieved!
- Mary Tinetti, a geriatrician at Yale University, and her team have developed models to incorporate patients' perspectives on health care, more in the context of multimorbidity than in specific health conditions. This model represents a way to operationalize patient-centered care. https://patientprioritiescare.org/
- Topics for future discussion: how to engage HCPs and administrators of hospitals; how/why to implement a CC; and what are the incentives to do so.

DR Barometer Survey 2.0

- Patients and their caregivers get overloaded with information especially with the access to the internet. This creates confusion. How to give credible information that they are able to digest and incorporate. How do we do this effectively?
- The DR Barometer 2.0 study will explore not only where patients go for info but also if the information is consistent across doctors and HCP disciplines. It will be insightful to know which HCP type or external group provides the most useful information.
- For the length of patient visit, the DR Barometer 2.0 Survey will include questions about the average time for an patient appointment with either DR or DME and whether patients feel they have adequate time to ask all questions/concerns.

Other resources

- Resource regarding health literacy and diabetes https://www.diabeteseducator.org/docs/default-source/practice/educator-tools/cultural-and-health-literacy-considerations-with-diabetes.pdf?sfvrsn=2
- The UK Ophthalmology Alliance and the Royal College of Ophthalmologists have calculated that at least 10,000 people have missed out on care essential to maintaining their sight in England, Wales and Scotland. Article: https://www.bbc.com/news/amp/health-52968845?__twitter_impression=true

Appendix 5. Resource Material

DR Barometer Global Report: https://drbarometer.com/docs/default-source/dr-barometer-study-finding-documents/drbarometer_global_report.pdf?sfvrsn=694f259f_2

DR Barometer 41 Country Reports: https://drbarometer.com/evidence/explore-the-data

Phipps, D., Pepler, D., Craig, W.M., Cummings, J., & Cardinal, S. (2016). The Co-produced Pathway to Impact Describes Knowledge Mobilization Processes. *Journal of Community Engagement and Scholarship, 9*(1). http://jces.ua.edu/the-co-produced-pathway-to-impact-describes-knowledge-mobilization-processes/

Articles on the PARiHS Framework (Promoting Action on Research Implementation in Health Services):

- Kitson, A., Harvey, G. & McCormack B. (1998). Enabling the implementation of evidence based practice: A conceptual framework. *Quality in Health Care, 7*(3), 149-158. http://www.ncbi.nlm.nih.gov/pmc/articles/PMC2483604/pdf/v007p00149.pdf
- Kitson, A. L., Rycroft-Malone, J., Harvey, G., McCormack, B., Seers, K. & Titchen, A. (2008). Evaluating the successful implementation of evidence into practice using the PARiHS framework: Theoretical and practical challenges. *Implementation Science, 3*(1), 1-12. http://www.implementationscience.com/content/3/1/1
- Stetler, C. B., Damschroder, L. J., Helfrich, C. D. & Hagedorn, H. J. (2011). A Guide for applying a revised version of the PARIHS framework for implementation. *Implementation Science, 6*(99), 1-10. http://www.implementationscience.com/content/6/1/99
- Stetler, C. B., Damschroder, L. J., Helfrich, C. D. & Hagedorn, H. J. (2011). A Guide for applying a revised version of the PARIHS framework for implementation. Additional file 3. FACILITATION REFERENCE TOOL: Definitions for a "Revised" PARIHS *FACILITATION* Element. http://www.implementationscience.com/content/supplementary/1748-5908-6-99-s3.pdf

Chronic Care Model and toolkit: http://www.improvingchroniccare.org/index.php?p=CCM_Tools&s=237

Peer support tool: https://www.peersupportsolutions.com/

Serrano-Gil, M., Jacob, S. Engaging and empowering patients to manage their type 2 diabetes, Part I: a knowledge, attitude, and practice gap?. Adv Therapy 27, 321–333 (2010). https://doi.org/10.1007/s12325-010-0034-5

Better Choices, Better Health® - Diabetes Online Chronic Disease Self-Management Program: https://d2mkcg26uvg1cz.cloudfront.net/wp-content/uploads/BCBH-Diabetes-overview.pdf

ICO Guidelines for Diabetic Eye Care (2017): http://www.icoph.org/downloads/ICOGuidelinesforDiabeticEyeCare.pdf

Diabetes Eye Health -A Guide for Health Professionals: https://www.worlddiabetesfoundation.org/sites/default/files/Diabetes%20Eye%20Health%20-%20A%20guide%20for%20health%20professionals.pdf

Schmidt-Erfurth, U., Garcia-Arumi, J., Bandello, F., Berg, K., Chakravarthy, U., Gerendas, B. S., Jonas, J., Larsen, M., Tadayoni, R., & Loewenstein, A. (2017). Guidelines for the Management of Diabetic Macular Edema by the

European Society of Retina Specialists (EURETINA). Ophthalmologica. Journal international d'ophtalmologie. International journal of ophthalmology. Zeitschrift fur Augenheilkunde, 237(4), 185–222. https://doi.org/10.1159/000458539

Integrating Diabetes Evidence into Practice: Challenges and Opportunities to Bridge the Gaps https://www.idf.org/images/Integrating_Diabetes_IDF_v16_1.pdf

Vision Academy COVID-19 materials: https://www.visionacademy.org/vision-academy-community/COVID-19-materials