

Framework for Telemedicine use in Management of Cancer, Diabetes, Cardiovascular Disease and Stroke in India



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Foreword



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Foreword

Non-communicable Diseases (NCDs) have become the leading cause of morbidity and mortality in the country. These patients require lifelong medical care to manage the conditions, prevent complications and premature death. Accessibility, availability and affordability of care is critical in management of NCDs. Continuous provision of care to the patients with NCDs is pivotal to manage the conditions and avoid complications. The Government of India's (GoI) response in improving access to health care has been strengthened by the release of the Telemedicine Guidelines in March 2020 by the Ministry of Health and Family Welfare. The e-Sanjeevani portal has enabled lakhs of consultations and is implemented across 28 states in India. This is an encouraging response as the nation is accepting and embracing technology for achieving health of their families and communities.

It is very crucial to provide the necessary capacity and skills to the health care providers to embrace telemedicine for health education, promotion, service provision and public health management of diseases. I am pleased that ICMR-National Centre for Disease Informatics and Research (NCDIR), Bengaluru has steered the development of such a guidance book '**Framework for telemedicine use in management of cancer, diabetes, cardiovascular disease and stroke in India**', that can provide clear guidelines of adopting telemedicine across the different levels of care to manage the major non-communicable diseases.

This book has highlighted the importance of strengthening referral systems, clinical expertise, clinical tools and the flow of knowledge and skills to primary care providers. It is appreciable that the best clinical expertise of our country has been involved so that its adaption across public and private health systems, primary care providers to tertiary care physicians, and for health promotion, preventive, curative and rehabilitative services is feasible.

I see this as an important step towards strengthening our country's response to tackle NCDs and achieving Health for All. I look forward to widespread use of this framework to develop more detailed guidance for healthcare providers, patients and their care givers.

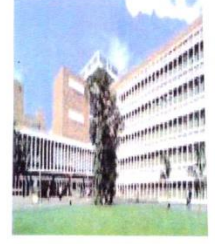
Balram Bhargava

(Balram Bhargava)

Message



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15th January, 2021

MESSAGE

Prevention, early detection and management of NCDs require efficient healthcare system which is affordable and accessible to all. Telemedicine can fill the gaps in provision of care where distance is a hurdle or patients cannot easily reach specialist centres. The Telemedicine Practice guidelines released by the Ministry of Health and Family Welfare in March 2020, aims to mainstream telemedicine in healthcare. In support, the guidelines on application of telemedicine in cancer, diabetes, cardiovascular diseases and stroke shall support the use of telemedicine for continued care of NCDs. The guidelines would attain special importance in the present pandemic times and continued application in all situations where the health care system needs to be strengthened for ensuring early detection, timely referral and management of the major NCDs.

The book “**Framework for Telemedicine use in Management of Cancer, Diabetes, Cardiovascular disease and Stroke in India**” by ICMR-NCDIR, Bengaluru is very timely and commendable. Specific guidelines on the major non communicable diseases so as to integrate telemedicine in healthcare practice for cancer, diabetes, cardiovascular diseases and stroke is explained.

The chapter on cancer shall enable practitioners to understand the use of basic telemedicine tools and exercising critical judgement when assessing cancers of different anatomical sites of cancer in various stages of disease. The framework is specific to the different modalities of cancer management and evaluation, and describes the role of telemedicine in surgical, medical, radiation oncology, palliative care, radiology and pathology. This could support the practitioners in diagnosis and management of cancer, taking treatment decisions, counselling, palliative care, and taking timely actions to prevent complications through telemedicine.

The guidelines provide an easy understanding of the basic concepts and methods through the use of illustrative flowcharts. I congratulate all the experts and ICMR-NCDIR for taking initiative to develop this document and wish for its successful dissemination across the NCDIR registry network of hospitals.


GK Rath



डा० जी०के०रथ, एम. डी./**Dr. G. K. Rath, MD, FAMS**
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Message

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MESSAGE

It gives me immense pleasure that ICMR-NCDIR, Bengaluru has brought out the “**Framework for Telemedicine use in Management of Cancer, Diabetes, Cardiovascular disease and Stroke in India**” in conjunction with the Telemedicine Practice Guidelines for Registered Medical Practitioners (RMPs). This guideline covers more general aspects on utilization of telemedicine in health care system, and in reference, the specific guidelines for NCDs shall further strengthen the health care system.

The chapter on application of telemedicine in management of diabetes mellitus includes the various aspects of diabetes management (screening/diagnosis, treatment, health education, complication screening and management). Clear demarcation on indication for face to face consultation in diabetes management and conditions that can be managed through telemedicine has been explained. This would enable health care workers to decide the mode of management depending on the nature and severity of the illness.

These comprehensive guidelines have been developed and reviewed by the team of experts in diabetes mellitus and their efforts in shaping the guidelines is highly appreciated. I am confident that the guidelines would help all endocrinologists, physicians, family practitioners and general medical practitioners in rural and urban areas in providing diabetes care. I congratulate ICMR-NCDIR for steering the development of NCD specific telemedicine guidelines, adding another feather to its achievements. I wish success for the release and dissemination of the book, and wish that the guidelines are used and applied appropriately by the medical fraternity.



Ashok Kumar Das

Message



ST. JOHN'S NATIONAL ACADEMY OF HEALTH SCIENCES

Division of Clinical Research and Training

St. John's Research Institute

MESSAGE

I am glad that ICMR-NCDIR, Bengaluru has brought out the chapter on application of telemedicine in management of cardiovascular diseases (CVD) in the document titled '**Framework for Telemedicine use in Management of Cancer, Diabetes, Cardiovascular disease and Stroke in India**'.

The specific guidelines on CVD shall enable the Registered Medical Practitioners to use technology in an efficient way to bridge the gaps in CVD care particularly for at-risk & vulnerable patients. CVDs are conditions requiring both acute and chronic care from medical practitioners. Telemedicine serves as an important tool to ensure accessibility for medical care, and enables health provider & patient education. The chapter on CVDs provides an overview on screening, evaluation, risk stratification, treatment, monitoring of complications and the guidelines on timely referral of the patient to tertiary care hospitals. It also has scope for further expansion on specific CVDs.

I extend my appreciation to ICMR-NCDIR for taking the initiative in developing the Framework on use of telemedicine specifically for CVDs. This shall guide general practitioners to understand the potential of telemedicine for prevention and management of CVDs.

Prem Pais
Professor
18th January, 2021

Message

Dr. P. Satishchandra

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MESSAGE

I am delighted that “**Framework for Telemedicine use in Management of Cancer, Diabetes, Cardiovascular disease and Stroke in India**” has been developed by ICMR-NCDIR. This would definitely aid the healthcare professionals in development of efficient and sustainable NCD care services across India through effective use of telemedicine.

Early detection and management of stroke is important not only reduce mortality but also to prevent disability, and reduce the burden on caregivers. The Covid 19 pandemic has necessitated medical professionals to innovate different ways of consultations both for acute stroke care and continuum of stroke care. The chapter on stroke explains about ‘Tele-stroke’ -application of telemedicine in diagnosis, assessment of severity and management of acute stroke and also plan for future rehabilitation. It also apprises the usage of telemedicine in educating community about recognising the symptoms of stroke and training doctors at all levels in organising stroke services using the framework of Tele-stroke.

These guidelines are very comprehensive and detailed, and can be used by health care providers at all levels to implement telemedicine in stroke care efficiently and improve service delivery and management. The efforts put in by staff of ICMR-NCDIR in this regard is laudable, and I sincerely appreciate the experts who have contributed and critically reviewed this document. I look forward to see its application in improving service delivery for stroke in the days to come in our country.

A handwritten signature in blue ink, appearing to read 'P. Satishchandra'.

DR. P. Satishchandra

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Preface



डॉ प्रशान्त माथुर डी.सी.एम.आर., डी.एन.बी., पी.एच.डी., एम.एन.ए.एम.एम.
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Preface

The rising burden of NCDs linked to the health transition of rural and urban India, calls for concerted efforts in health promotion, early detection, timely management and continued care for NCDs so as to reduce disability and premature death. India has leveraged many activities and interventions under the National Programme for Prevention and Control of Cancer, Diabetes, Cardiovascular Diseases and Stroke (NPCDCS), Ayushman Bharat Health and Wellness centres linked to the National Medical College Network (NMCN), and the Ayushman Bharat scheme to synergize the health system response to NCDs.

The recent release of Telemedicine Guidelines in March 2020 has provided the technical and regulatory framework for Registered Medical Practitioners to practice medicine using digital solutions and communication networks. The goal of telemedicine is to improve accessibility of care among communities in remote areas, and for people with limitations in mobility, transportation and time. There are technical, ethical and financial challenges in implementing telemedicine in India. If implemented properly, telemedicine can improve access to care by eliminating barriers like time constraints, travelling long distances and prolonged waiting time in hospitals. It is a powerful tool to build referral systems and link primary and secondary levels of healthcare system both in government and private sectors to tertiary care, through standard workflows and protocols.

Experts on Cancer, Diabetes, Cardiovascular diseases (CVDs), and Stroke through four working groups, developed specific guidelines on telemedicine use in management of major NCDs respectively, which was further reviewed and finalized by subject experts. The guidance book is organized as Chapters 1 and 2 that provide an overview of telemedicine and its application in management of NCDs. Chapters 3 to 6 elaborate guidelines specific to Cancer, Diabetes, CVDs and Stroke, respectively. Each chapter describes guidelines on consultation, referral, prescription of medicines, monitoring of biochemical parameters and health education through telemedicine. They also explain its utility in improving emergency care for respective diseases. Overall, it aims to strengthen the continuum of care for the major NCDs.

At the outset, this guidance book shall benefit the nation-wide network of hospitals that are part of the ICMR-NCDIR registry network in developing databases on cancer, diabetes, CVDs and stroke in India. It shall further support training of RMPs in telemedicine use in management of NCDs. There is further scope for development of comprehensive disease specific guidelines and ICMR-NCDIR shall ably support such processes.

I look forward to its dissemination and adoption to strengthen management and control of NCDs.

Prashant Mathur

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Acknowledgement

NCDs are among the top five leading causes of disease burden in India. Patients with NCDs need both acute care and long-term management and monitoring. Telemedicine can be used to sustain the interventions in health promotion, prevention and control of NCDs in India. In the context of Telemedicine Practice Guidelines released from MoHFW, ICMR-NCDIR has worked with experts in the fields of Cancer, Diabetes, Cardiovascular Diseases and Stroke, to develop a detailed guideline for the management of the major NCDs.

We express our sincere gratitude to the Conveners of the Working Groups Dr. SVS Deo, Dr. Anoop Misra, Dr. P C Negi, Dr. MV Padma Srivastava who have translated evidence and experience to develop the framework guidelines of use of telemedicine in management of Cancer, Diabetes, Cardiovascular diseases and Stroke. The extensive discussions and inputs provided by all the members of the Working Groups, has shaped the development of the chapters, and their motivation to complete the work is greatly acknowledged.

We sincerely thank each one of the reviewers - all senior faculty and subject experts who carefully reviewed the content and provided valuable suggestions for its finalization.

The encouragement of Prof Rath, Chairperson, SAC, ICMR-NCDIR has helped us to take up this enterprise to its completion, and we are thankful for his support and advice. We duly acknowledge the suggestions and support from Dr. Satishchandra, Chairperson, Research Area Panel-Stroke, Dr. Ashok Kumar Das, Research Area Panel-Diabetes, and Dr Prem Pais-Research Area Panel-Cardiovascular diseases. We are extremely thankful for the critical inputs from the Research Area Panels and Scientific Advisory Committee, ICMR-NCDIR for completing this exercise.

We are deeply inspired by Prof Balram Bhargava, DG, ICMR who has supported and motivated NCDIR in all endeavours in research and capacity building in NCDs, and we duly acknowledge his support in facilitating this work.

We are deeply grateful to Dr. Prashant Mathur, Director, National Centre for Disease Informatics and Research Bangalore for leading and guiding the scientists team, his valuable insights on the framework of telemedicine use, and his unstinted support in the development of the book and its release.

We acknowledge the active involvement and efforts from scientific, technical, administrative staff of ICMR-NCDIR for completion and release of the book. The motivation and sustained interest and team work has helped to see the light of the day in the release of the book.

We hope that this book shall provide the much-needed guidance to health providers and systems to organize and implement telemedicine for the management of the major Non-communicable diseases in India. We sincerely believe that the book shall support the clinical practices of the hospitals of NCDIR registry network. We are thankful for the opportunity to be part of the process of developing and publication of this book.



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