



CMIE HEALTHCARE INNOVATION BOOTCAMP SERIES

BOOTCAMP ON WOUNDCARE
7 - 9 April 2023
Burns and Plastic Surgery Block, AIIMS

“**QUEST FOR NEW SOLUTIONS IN WOUND CARE**”

Jointly Organised by
CMIE, AIIMS & Department of Plastic,
Reconstructive and Burns Surgery, AIIMS

CMIE-AIIMS HEALTHCARE INNOVATION BOOTCAMP SERIES

Bootcamp on Wound Care: A REPORT

7th – 9th April 2023

'CMIE-AIIMS Healthcare Innovation Bootcamp on Wound Care' was the third in a series of events designed specifically to stimulate indigenous innovations in the healthcare space. It was undertaken in collaboration with the Department of Burns and Plastic surgery led by Professor Manish Singhal with enthusiastic support from the Departmental staff of healthcare workers, nurses and surgeons. The Boot-Camp format was specifically designed to enable start-ups and entrepreneurs from India to be able to ideate on and to produce world-class safe and effective healthcare solutions via problem identification and clinician-user specific inputs for designing innovative solutions as per the caregivers' needs.

While previous such activities by the CMIE were necessarily in virtual mode, this was the first such interaction undertaken physically and in the precincts of an ongoing clinical care facility. This proved a huge advantage in enabling a demonstration of bedside practice and clinical needs, in enabling identification of the gaps in the existing solutions for wound care, and also the scope of innovation in wound care. Respective domain experts further elaborated on issues of regulatory compliance, logistics of preclinical and clinical trials as well as modalities of attracting investment for the startup. The small group size and the meeting format enabled time and opportunity for formal and informal discussions and one-on-one interactions for participants to explore and discuss ideas and possible collaborations.

CMIE – AIIMS is greatly encouraged by the success of this startup-clinician small group interaction via the “Boot-Camp” mode and is keen to encourage other Departments to plan similar activity. The activity is designed to bring together like minded clinician-innovator-researcher groups that can then explore and play a pivotal role towards need-based innovation with greater commercial success and user-specific profiling of the health care products.

The details of the current activity are detailed below:-

Objectives of the Bootcamp:

1. Stimulate Innovations in the Wound Care Space
2. Real-time problem identification
3. Support and Promote indigenous STARTUPS to Innovate in Wound Care Space
4. Collaboration Opportunities

Participants:

Thirteen individuals were selected for the immersive interaction program, with a focus on developing wound care products. Among the participants were startups and aspiring entrepreneurs working on innovative solutions, ranging from advanced stem cell therapeutics to dressings, to specialized beds designed for wound care.

Key Content of the Bootcamp:

The Bootcamp offered immersive interaction, and panel discussions among the innovators and the experts including healthcare delivery personnel viz. surgeons, clinicians, residents, and nursing staff. The key content of the three-day Bootcamp included:

Interactive Talks:

Prof. Amit Dinda, Chief Coordinating Officer, CMIE gave an introduction to the course. He delightfully shared his vision of bootcamp bringing together diverse stakeholders, including clinicians, researchers, engineers, entrepreneurs, and industry experts, to collaborate and create innovative solutions to address the challenges associated with healthcare products, delivery and management. Prof. Maneesh Singhal, Head, Burns & Plastic Surgery Department, AIIMS, New Delhi, AIIMS shared his insights on the importance of need of innovation. He

explained and emphasised that there is a huge scope for innovation in the woundcare space highlighting the key whitespaces as per clinicians' problems while managing different kinds of wounds.

Following a brief introduction of the participants, the bootcamp started with the “Basics of Wound Healing and Classification” – a talk delivered by Dr Amiteshwar Singh,. Dr Singh gave a detailed note on classifications of the wound based on their types and shared the basics of wound healing by showing pictorial representations. Talks on “Recent advances in wound management” and Wound dressings and relevance of their compositions and A practical demonstration of wound Dressings” were delivered by Dr Suvashish Dash; followed by a talk on “Challenges in wound care” delivered by Dr Shivangi Saha. Case studies on “Pre-clinical/Clinical Validation” was conducted by Prof. Dinda and Dr. Saha to give a glimpse on the study design, protocols and outcome assessment.

Clearing up the basics, the bootcamp showcased advance talks like “Tissue Nano transfection Technology and changing paradigm in regenerative medicine” by Prof. Chandan Sen, Indiana University, USA and Stem cells, Platelet , Exosome based therapy for wound care in the clinical interface” by Prof. Sujata Mohanty, AIIMS.

The regulatory perspective of wound care products’ by Dr Subhash Sugathan, Director, QAscent Research Solutions Pvt. Ltd. Dr Sugathan shared his valuable insights on the regulatory framework in India to get medical use products into the market. He explained the process, forms, and supported documents required to get respective approvals from the regulatory agencies (CDSCO) in India aspect to market wound care products. Dr Kshama Kothari, Director, Health, Social Alpha. Dr Kshama explained the various venture capital funding that is available for startups and also the important aspects while preparing the pitch-decks. She highlighted the critical points that are to be taken care while writing a grant and pitching it. Challenges & Logistics of getting funding by Start-ups – a talk delivered by Dr Vijender Jeph, Lead, IPE Global covering the challenges, insights, gaps while preparing the pitches, write-ups, use of social media and the kind of funds available from IPE Global for innovation in healthcare sector.

The titles of the talks were:

- Wound Classification and Basics of Wound Healing
- Regulatory aspects of wound care products
- Funding opportunities (Public and Private)
- Writing Grant Proposals
- Pre-clinical Validation Studies
- Scope of Innovations in the area of wound care
- Advanced dressings available in the market
- Recent advances in wound management
- Challenges in wound care
- Tissue Nano transfection Technology and changing paradigm in regenerative medicine
- Tissue engineering applications in wound care: The challenges
- Stem cells, Platelet, and Exosome based therapy for wound care in the clinical interface
- Clinical Validation Studies
- Challenges & Logistics of getting funding by start-ups

OPD/ICUs/OTs Visits:

The participants were taken near to Intensive Care Unit (ICU) environment, Burn & Plastic Surgery Department (BPS), AIIMS, New Delhi. The surgeons demonstrated the procedures required to manage different kinds of wounds and gave them critical insights into the problems in wound care and management on the ground. After such an exhilarating experience straight away, the participants were taken to the board room for interactive talks

- Demonstration of different kinds of wounds

- Practical demonstration of wound AIIMS dressings
- Demonstration of the best practices of wound care and management
- Demonstration of personalized adaptive rehabilitation solutions at the Physiotherapy Centre

Immersive Interactive Sessions:

The participants were made to visit the clinical wards setting and the physiotherapy centre. Demonstrations of various multiple devices used for patient rehabilitation were made. The participants were stimulated to see that small innovations in the devices can lead to personalized rehabilitation therapy without incurring a cost.

- Demonstrated negative-pressure dressing for wounds
- One-to-one interaction addressing specific queries
- One-to-one interactions with clinicians seeking prospective collaborative opportunities
- One-to-one interactions with the investors (Social Alpha and IPE Global)

Inauguration Ceremony

The CMIE Healthcare Innovation Bootcamp on Woundcare, organized by the Centre for Medical Innovation and Entrepreneurship (CMIE) and Burns & Plastic Surgery Department, AIIMS, New Delhi, commenced with an inaugural ceremony held on 7th April 2023. The ceremony was graced by esteemed dignitaries, including Dr M Srinivas, Director of All India Institute of Medical Sciences (AIIMS), New Delhi, and Dr Manish Diwan, Head of Strategic Partnership from Biotechnology Industry Research Assistance Council (BIRAC). The Director, of AIIMS, highlighted the role of AIIMS in fostering innovation and entrepreneurship in healthcare. Dr Manish Diwan shared insights on the importance of public-private partnerships in driving healthcare innovation and highlighted BIRAC's efforts in supporting startups and innovators in the biotechnology sector.

Prof. Alok Thakar, Head, CMIE & Professor and Head, Dept. of Otolaryngology & Head-Neck Surgery, AIIMS expressed his excitement about the bootcamp and emphasized the significance of collaboration among different stakeholders to drive healthcare innovation. He thanked the esteemed guests for their support and participation in the inauguration ceremony.

Prof. Dinda substantiated the importance of CMIE Bootcamp series as pioneering initiative aimed at fostering innovation and entrepreneurship in the field of Healthcare, to develop cutting-edge solutions, especially for strengthening the Indian Healthcare System. The bootcamp brings together diverse stakeholders, including clinicians, researchers, engineers, entrepreneurs, and industry experts, to collaborate and create innovative solutions to address the challenges associated with healthcare products, delivery and management.

Idea Pitch Deck and Prospective Collaborations:

One-on-one interactions among the participants and clinicians to explore possible collaboration opportunities. The session was designed to make participants disclose their idea(s) under a Non-disclosure Agreement (NDA) signed by the clinicians and the participants. The participants asked their specific queries related to their respective products/technologies and their application feasibility in the wound care clinics.

A video of the event is being uploaded on YouTube - <https://youtu.be/koAPsYEy1A8>