

**GOVERNMENT OF INDIA
MINISTRY OF HEALTH AND FAMILY WELFARE
DEPARTMENT OF HEALTH AND FAMILY WELFARE**

**LOK SABHA
UNSTARRED QUESTION NO. 1109
TO BE ANSWERED ON 22nd July, 2022**

MEDICAL DEVICES

1109: DR. (PROF.) KIRIT PREMJBHAI SOLANKI:

Will the Minister of **HEALTH AND FAMILY WELFARE** be pleased to state:

- (a) whether the Government is aware of new medical devices like Artificial Intelligence (AI) which are used for monitoring critically ill patients in ICU/OT, and also long-lasting and less invasive implantable devices like heart valves, pacemakers, stents, hearing aids, as well as faster diagnostics kits equipment emerging continuously in the global market;
- (b) the measures being taken by the Government to provide country's top medical research institutes with access to innovative medical devices in order to ensure that the patients are given the best health care facilities; and
- (c) the details of the measures taken or proposed to be taken by the Government to train postgraduate students of Government medical colleges on latest medical technologies such as AI?

ANSWER

**THE MINISTER OF STATE IN THE MINISTRY OF HEALTH AND
FAMILY WELFARE
(DR. BHARATI PRAVIN PAWAR)**

(a) to (c): Council of Scientific and Industrial Research (CSIR) has informed that it has a "Mission Mode Project on Medical Instruments and Devices" to take lead in the manufacturing of high-end medical devices in the country and the following prototypes have been developed under this mission:

- i. Plasmonic photothermal based sterilization device;
- ii. Dialysis machine for hemodialysis of Chronic Kidney Disease (CKD) patients and Indigenous hollow fiber membrane modules for hemodialysis;
- iii. Diagnostic system for detection of circulating tumor cells using optical fiber sensor;
- iv. *Robog* - robotic gait trainer for rehabilitation of spinal cord injury patients;
- v. Bio-mechatronic orthotic device with virtual intelligence;
- vi. Rehabilitation device for hand function impairments;
- vii. Advanced closed loop control system for electric assisted tricycle;
- viii. Vascu-guide: vascular sclerotherapy guidance and assistance tools;

- ix. Thermal imaging system for diagnosis of knee osteoarthritis and Non-invasive diagnosis system for compartment syndrome;
- x. Dristiscope –an operating microscope;
- xi. Handheld IOT enabled colposcope for early cervical detection;
- xii. Additive manufactured implants;
- xiii. Surface modification of titanium alloy implants with bioactive, anti-bacterial and anti-corrosive properties; and

The constituent laboratory of CSIR namely Central Scientific Instruments Organisation, Chandigarh has developed the following:

- *AI based devices*
 - Image-guided device for vascular vein visualizer (VeinViz)
 - Divya Nayan - A personal reading machine for visually impaired
- *Faster diagnostics kits/devices*
 - Hand held device for monitoring of cardiac biomarker and has applied for a patent also
 - Batch digital microscopy with marker-specific auto-scoring for high throughput analytics
 - Minimally invasive point of care device providing rapid total leukocyte count (TLC) at patient bedside
- *Long-lasting implantable devices*
 - 3D printed patient specific orthopedic & maxillofacial implants

All India Institute of Medical Sciences (AIIMS), New Delhi has established a Centre of Excellence for Artificial Intelligence (AI).
