7.2.1 Two Institutional Best Practices 2022-23

Best Practices as per the NAAC format provided in the Manual

1. **Stewardship Program**
2. **Artificial Intelligence in Diagnosis:** Pearl Second Opinion tool

Stewardship Program

1. **Title:**
   Stewardship Program

2. **Objectives of the Practice:**
   Stewardship program in oral oncology is initiated for Interns of I.T.S Dental College & Hospital in collaboration with Dharamshila Narayana Super speciality Hospital. The objectives of the practice include exchange of academic, research and other educational materials between the two Institutes.

3. **Context:**
   Under this program, the two institutions-I.T.S Dental College & Hospital and Dharamshila Narayana Super speciality work to develop agreements or programs for exchanging academic, research and other educational materials. Faculty and Program directors at both institutions are encouraged to enter into collaborative research. The program started on 15th February, 2023 and the duration of the program was 3 weeks(6 hours a day, 5 days a week). The course mentor is Dr. Anshuman Kumar (Director- Surgical Oncology and Clinical Lead-Academics, Dharamshila Narayana Super speciality Hospital.

4. **The practice:**

The specific learning objectives of this program include the following:

- Clinical tips for diagnosis of Oral malignancy
- Staging of Oral malignancy
- Do's and Don't's when suspecting a malignancy
- Types of Biopsies
- Histopathological Diagnosis
- Observation of surgical procedures
- Patient counseling

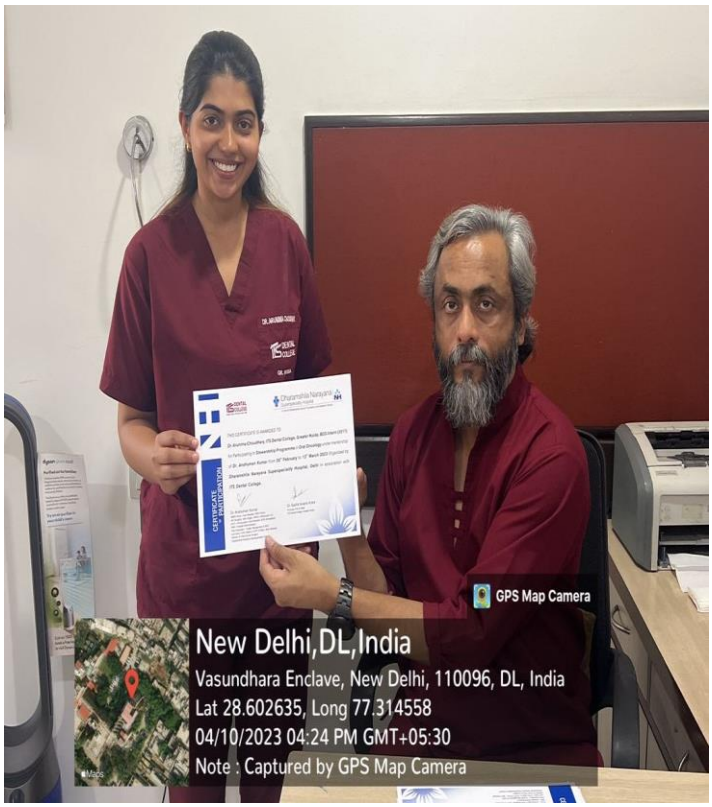
Furthermore, the two institutions explore avenues to develop financial resources to support educational activities sponsored under this Agreement, including joint grant proposals.

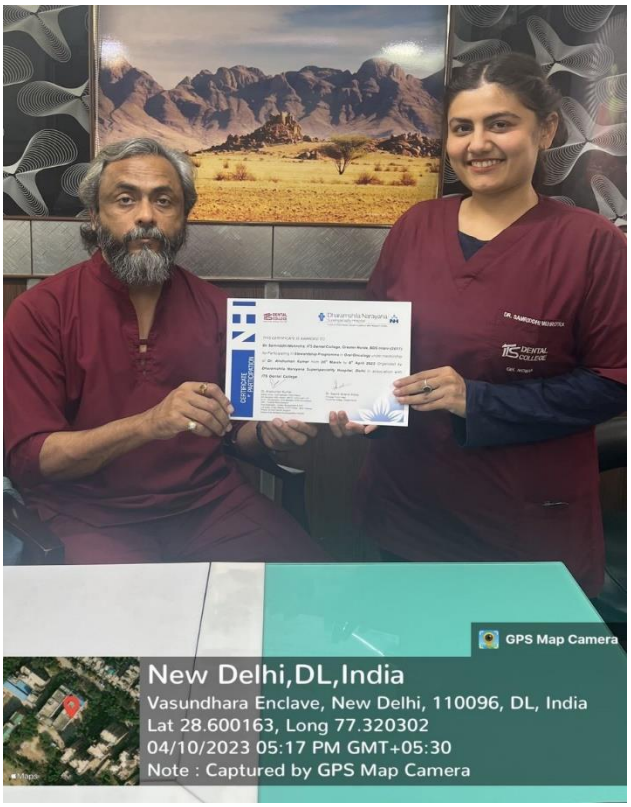
5. **Evidence of success**

Students were initially reluctant to undergo such a training, but after they went for the training, they became receptive. The testimonials received from the students is clearly an evidence of the success of this program as the kind of exposure and learning experience they received was quite value adding.

6. **Problems encountered & resources required**

Students initially faced difficulty commuting to the venue. Transportation facility was then provided to the students.





Artificial Intelligence in Diagnosis: Pearl Second Opinion tool

1. Title of practice:

Artificial intelligence in diagnosis: **Pearl Second Opinion tool**

2. Objective of practice:

From diagnosis and treatment planning to practice management, augmented intelligence is positioned to transform the way dentists care for their patients.

- Screening radiographs for bone loss, caries, calculus, crown indications and other findings.
- Evaluating digital information such as radiographs, photographs and patients' electronic health records to help make diagnoses and propose treatments.
- Monitoring phone calls to improve patient communications.
- Making the insurance claim adjudication process more efficient.
- Identifying normal and abnormal structures.

3. The context:

Artificial intelligence (AI) is being used in various fields, including dentistry, to improve the accuracy and efficiency of diagnosis and treatment. AI can help in **smart decision-making** by analysing data and predicting outcomes. It can also **automate** repetitive tasks, reducing the need for human intervention. In the medical field, AI can help doctors and nurses diagnose and treat patients without requiring an expensive or time-consuming hospital visit. AI can also help in **research and data analysis** by processing large amounts of data and identifying patterns that humans may not be able to detect. AI can also **improve patient experience** by providing personalized recommendations and assistance.

4. The practice:

AI Dental Technology has improves Clinical Decision-Making and Standardization of Care. Dental AI empowers providers to make informed clinical judgments faster. By analyzing visual images and historical and current digital radiographs, AI instantly enables dental professionals to see diagnostic results. This ability allows them to decide the best modalities for the patients while eliminating unnecessary procedures. Dental AI streamlines the workflow to enhance Production and Profitability. Dental AI Improves Data and Patient Record Management. AI Dental Technology Enhances Patient Education to Improve Case Acceptance.

This tool reads the OPG and automatically performs a **detailed diagnosis of the patient's mouth** highlighting all findings. This would eventually give a lot more confidence to the patient post the OPG

5. Evidence of success:

As now days AI is been used in dentistry. After few cases, following observations were seen:

1. Started working on AI with more confidence related diagnosis and treatment planning.

2. With the help of AI were able to identify pathologies and do implant planning.

6. Problems encountered & resources required

The field of artificial intelligence (AI) is rapidly evolving to fill an ever-expanding niche in medicine and dentistry. Most AI research is still in its nascent stage. Increased availability of patient data can accelerate research into artificial intelligence, machine learning, and neural networks. There are few real-time AI applications integrated into the internal operational process of dental clinics. Research has shown that data-driven AI is reliable, transparent, and in certain cases, better than humans in diagnosis. AI can replicate human functions of reasoning, planning, and problem-solving. Its application can save time and storage, reduce manpower and eliminate human errors in diagnosis. The rise of artificial intelligence in dental care will revolutionize dentistry and usher in wider access to dental health care with better patient outcomes.