Best Practices

I. Digital Dentistry

Context:
Digital dentistry represents a transformative shift in dental care, integrating advanced technologies to improve precision, efficiency, and patient outcomes. As patient expectations rise and technology advances, adopting best practices ensures streamlined workflows and high-quality treatments.

Objectives:
1. To enhance diagnostic accuracy through advanced imaging and 3D scanning.
2. To improve patient experience with faster, minimally invasive procedures.
3. To optimize treatment workflows using CAD/CAM, digital planning, and guided surgeries.
4. To ensure predictable results in orthodontics, prosthodontics, and implantology.
5. To facilitate continuous learning and skill development among dental practitioners.

Practice:
Adopting digital tools like intraoral scanners, CBCT imaging, 3D printers, and software for orthodontic aligner planning, implant surgical guides, and smile design. Emphasis is placed on seamless integration of these technologies into daily clinical workflows.

Evidence of the Practice:
- **Digital Implantology:** Case studies show a 95% accuracy rate in implant placement using guided surgery software.
- **CAD/CAM in Prosthodontics:** Reduced chairside time by 50% compared to conventional methods.
- **Smile Design:** Enhanced patient satisfaction with pre-visualized treatment outcomes.

Problems Encountered:
1. Initial cost of equipment and software.
2. Steep learning curve for practitioners transitioning from traditional methods.
3. Maintenance and updates of digital systems.

Resources Required:
1. High-quality intraoral scanners and CBCT machines.
2. Advanced software for treatment planning and execution (e.g., aligner planning, implant guides, smile design).
3. Skilled personnel trained in digital workflows.
4. Financial support for technology acquisition and training programs.

Conclusion:
Implementing these best practices ensures the integration of evidence-based digital workflows into clinical practice, promoting superior patient care and setting benchmarks for the dental industry.

II. Short term research Work for undergraduate students

Objective:

- To know and develop the research skills in undergraduate level to improve confidence in their future research field.

Context:

Research work is to find the answer or to solve the problem which threaten the society and the life of human being. In India the clinical courses like Medical and dental sciences have this research work only from their Post graduate studies. But the students should know the facts and background of research in their BDS level itself. This Short term research program was designed to improve their research and experimental skills and to apply their subject knowledge in various research fields to find the solution to solve the problems.

Practice:

BDS internship students were divided into various group with one Guide and one Co-Guide for their Short term research work. The team should get approval from Institutional Review Board (IRB) to proceed their Short term studies. Progress of each project should be submitted to the research advisory board which is headed by the Principal. Finallyeach team should publish or submit their Short term research in reputed DCI approved journals before their completion of BDS Internship.

Evidence of success:

- The team learnt the basics of developing research questions, hypothesis and designing of experiments.
- The students also learnt the new experimental techniques and scientific writing skills.
- The ongoing research work number increased after this Program.

Problems encountered and resources required:

- Students faced some financial and time delay problems during their research work.