

## **Best Practices**

### **1. Title : Research to Practice**

### **2. Objective of practice**

- a. To overcome drift in communication between researchers and practitioners, and service delivery issues.
- b. To emphasize on scientific publications of research on intervention effectiveness.
- c. To deal with issues cited by public health practitioners which may be too narrowly focused, complex, difficult and costly, or may not engage or meet the perceived needs of the community.
- d. To introduce prevention programs which must be sustained with adequate infrastructure and long-term intensity, requiring substantial resource investment.
- e. To culminate with the production of an “effective action briefing”.
- f. To overcome a research gap in the internal validity of clinical trial results.

### **3. The Context**

The longitudinal investigation of clinical outcomes in population-based samples is a good alternative to explore in practice-based research how individual-related variables affect dental treatments. The large samples, the long period of follow-up and the involvement of a team of researchers make cohort studies expensive to maintain on long term. Normally these studies are multidisciplinary, with several research questions. This characteristic provides access to a high number of exposure variables which is difficult to obtain in clinical prospective or retrospective studies. Generally, cohort studies assess individuals but fail to present detailed variables on dental treatments because dentists are not

investigated. These studies are under risk of selection bias, as dentists invariably choose the interventions according to their judgment criteria. Some imprecision or contamination of data should also be taken in account, because patients could, for instance, visited other dental practice and undertaken other treatments, and this may not be reported in the dental records screened for research.

#### **4. The Practice**

The approach to select interventions or strategies for treatment of oral conditions should be based on the best scientific evidence available. Practice-based research has several advantages when compared to research conducted in more “artificial” environments, such as in dental schools and other academic settings. It also usually deals (or should deal) with clinically relevant problems for patients and clinicians, while several academic clinical studies are reporting on surrogate endpoints.

With more motivation and enthusiasm towards research bridging gap in clinical practice, we have focused our students towards grants by national government and state funding agencies like ICMR, DST, CSIR and various other senior and junior research fellowship programs.

Research based clinical trials recommends practice field meetings to facilitate communication between researchers, public health practitioners, policy makers, managers and other professionals from important sectors. These groups identified strategies, policies, target populations, barriers, facilitators and funding streams for implementing development programmes.

#### **5. Evidence of success**

By bridging a gap between clinical practice and research, various success outcomes have come around. As a institute by working on various research based projects in research lab and applying on patients directly by monitoring the invitro results of various different kind of materials and analyzing its effects on patients have bring successful results in the form of increasing number of national and international publications in indexed journals with high impact factor. Increased number of grants where students are getting junior research fellowship and senior research fellowships by government recognized funding agencies and getting various awards by presenting their evidence based research projects in national and international conferences organized by renowned bodies. Treatment based on research based evidences has resulted in remarkable patient outcomes.

## **6. Problems encountered and Resources required**

Cooperation among a diverse group of stakeholders—including research sponsors (industry, academia, government, nonprofit organizations, and patient advocates), clinical investigators, patients, payers, physicians, and regulators—is necessary in conducting a clinical trial today. Each stakeholder offers a different set of tools to support the essential components of a clinical trial. Time, money, personnel, materials (e.g., medical supplies), support systems (informatics as well as manpower), and a clear plan for completing the necessary steps in a trial are all part of the clinical research infrastructure. Significant time, energy, and money are spent on bringing the disparate resources for each trial together.

## Best Practice 2

1. Title: Technology to promote digital transformation of higher education

### 2. Objectives

- a. To integrate technology with student education , patient care and administration
- b. Using digital media softwares to upgrade the typical classroom leading to better student – teacher interaction.
- c. Use of software to efficiently streamline overall patient management in the hospital as well as its satellite centers.
- d. Use of dedicated portals to interact between the various stakeholders and solve issues transparently.
- e. Use of Employee Management Software to ensure transparency.

### 3. The Context

Digital transformation of higher education is not a choice but a necessity in recent times. This transformation is required not only in the classroom but also in the management of employees, patients and parents. Our entire workforce has kept up with the digital boom in its truest sense. This has resulted in a smooth transition for all the stakeholders of the institute even during the Covid 19 pandemic.

### 4. The Practice

The combination of technology and education is revolutionizing the way students are trained. Our institution has an extensive broadband coverage with the Cyberoam portal with individual login id and password for all the faculty, students and staff.

Incorporation of biometric attendance has led to a simplification and transparency of attendance monitoring system. The powerpoint presentations and video of clinical procedures are shared prior to the class for better understanding. Whatsapp groups are created year wise so that students can interact and share their questions or doubts. Assessment of their knowledge is

conducted using the Easy test software in the simulation lab. MCQs are shared using this software in the student's respective screens and a remote was provided to choose the answer.

Webinars are conducted through video conferencing using Logitech CC300E system and Skype, with accomplished faculty from other institutions.

Twak-To Software:

This is a chat portal through which online chatting is done to provide college information to students as well as their parents. Patients can also communicate via this software and solve their queries pertaining to dental treatment.

Technological aids for students

Online Public Access Catalogue: An online book access system is deployed at the central library for quick and convenient retrieval of listing in the books available in the central library. The user can search for books by the name of the author, subject or publisher with precise location.

Library Automation Software- Alice For Windows: This software is installed for effective management of the central library. Circulation of books, i.e. book issue and return is done through Alice software.

EBSCO host: Our institution has subscribed to the EBSCO host for the online availability of journal articles. There is a specific user name and password which can be shared with the faculty and the students to access the online journals available in that portal.

During the Covid pandemic, various online platforms such as Zoom, Google Meet and Google Classrooms were used by the faculty and the students so that the classes and assignments could continue uninterrupted. Preclinical classes, written and viva voce examinations were also conducted to develop skills during the lockdown period using these online platforms. Multiple choice question were conducted for the interns using the Quizziz application. Online webinars were also conducted using online platforms.

Technology in Human resources management

HR One software is used to manage salary and leaves of employees. Login ID is generated for each employee for easy access and management of attendance and leave records.

Almighty Help Desk: All complaints regarding maintenance matters of the institution are lodged through this software and resolved in a time bound manner with an escalation policy for unresolved complaints.

#### Technology in Patient management

##### Orion Software:

Patient management software is used extensively to improve patient care, reduce waiting times and monitor work output of the students with access to diagnostic and treatment records of all patients.

##### Clinytics App:

Due to the ongoing Covid pandemic, we could only conduct emergency OPD services. To connect to the patients even during these unforeseen times, we have started using the Clinytics application. Online consultation, in line with Teledentistry, provides online video appointments and consultation in an accessible and affordable manner.

#### 5 Evidence of success

The students have provided a positive feedback for powerpoint presentations and in some instances have indicated their preference for online classes for select topic. The use of MCQ based software has improved the results of the subsequent batch for competitive examinations. The orion software has proved to be a boon to obtain and compare data between various years and students. It has also benefitted in handling long term records of patients to correlate long term follow up. The HR1 software has ensures smooth and transparent management of faculty and staff data along with their reimbursements.

#### 6. Problems encountered and resources required

The technological advancements require financial commitment. A dedicated IT lab is required.

Training modules need to be given to faculty and students for the ORION, clinytics, HR one and Almighty desk applications and any new faculty needs to be trained.