

**BEST PRACTICES
OF THE INSTITUTE**

Best Practice No. 1

WASTE WIZARDS

Introduction

Dental colleges worldwide serve as crucibles of knowledge, innovation, and compassionate patient care. In navigating the complex landscape of oral health, our institution adheres to a set of best practices designed to cultivate skilled professionals, advance dental science, and uphold the highest standards of professionalism. Its foundational objectives and context define the landscape of dental education.

Objectives

The implementation of best practices in dental education is aimed at achieving several objectives, all of which contribute to overall improvement of quality of dental education and consequently the effectiveness of dental care. Some of the key objectives are-

- Enhancing student learning
- Ensuring patient safety and quality care
- Adopting innovation
- Promoting research & evidence-based practice
- Continuous quality improvement
- Eco-friendly practices
- Meeting accreditation standards

The Practices

Best Practice 1- WASTE WIZARDS

The main motive of this practice to promote creative thinking, environmental awareness, resourcefulness and encouraging sustainability.

The detailed document of the practice has been attached department wise (PFA).

1. Department of Public Health Dentistry

HAND PUPPET FROM USED MASKS

Objective:

The main motive of the project is to establish the use of waste of used masks which may create biohazard in upcoming years.

Context:

This method is easy as it requires material as it is usually available easily and is not expensive.

The Practice:

The practice is based on an attempt to save the nature and to decrease the amount of waste products that are released from institutions.

This method is a creative step towards promoting awareness towards the environment as it reduces the 'piles of waste'

Evidence of Success:

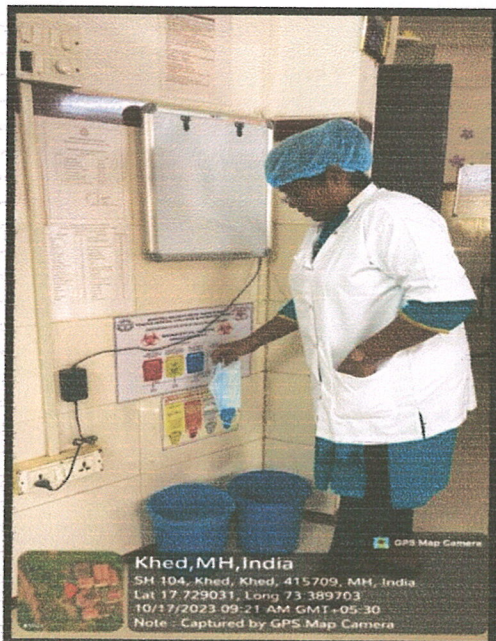
The evidence involves the preparation of one hand puppet which was made within the period of one week.

Problems encountered and resources required:

A minor problem which is encountered is the sterilization of the masks.

An availability of UV light steriliser is a bit problem but the best alternative for UV light sterilizer is dry heat steriliser

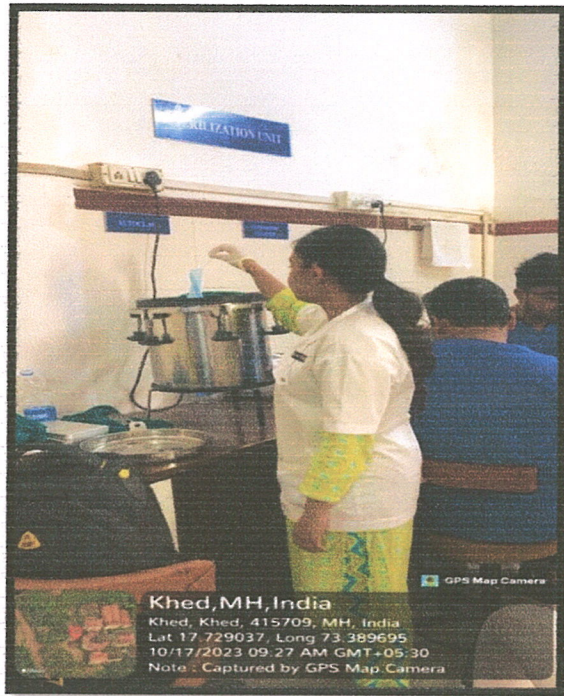
Following are the pictorial representation of procedural steps of the project:



STEP 1: Disposal of mask



STEP 2: Collection of mask



STEP 3: Sterilization of Mask



STEP 4 : Stuffing of mask



STEP 5: Customization of mask

ECO GLOW LUMINARIES

Objective of the practice: -

Efforts to reduce Waste pollution from paper cups by Utilisation of the waste paper cups which

Can be detrimental to environment and which creates environmental pollution

The context: -

Sterilization can indeed be a challenging issue when repurposing waste paper cups for projects like making light lamps. Since these cups are typically used for patients while treatment and may be contaminated with residues or blood, ensuring they are properly sterilized is crucial

The practice: -

This is a creative and eco-friendly way to make the best out of waste materials by giving them a new purpose. By reusing discarded paper cups to make light lamps, not only reduce waste but also contribute to sustainable and environmentally friendly practices. It's an excellent example of how innovation and creativity can help address environmental concerns.

The evidence of success: -

Evidence of success in reusing waste products like paper cups helps in avoiding environmental pollution. Repurposing waste materials not only reduces the burden on landfills but also contributes to a more sustainable and eco-friendly approach to resource management. These practices are implemented effectively, it has created positive impact on both the environment and resource conservation.

Problem encountered and resources required: -

Sterilization can be a challenging aspect when preparing light lamps from waste paper cups. Following are the pictorial representation of the procedural steps of the project:

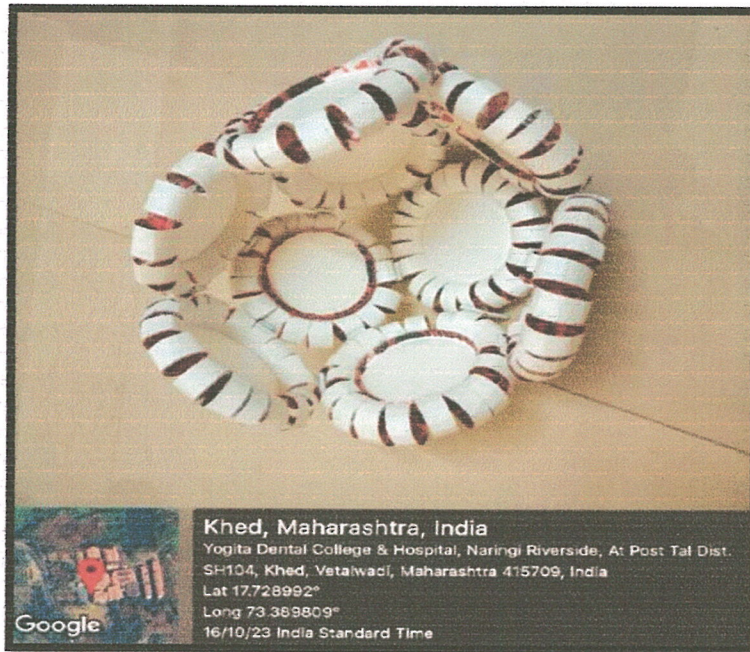
Step1: Collect the paper cups from department

Step 2: Sterilize the paper cups in UV Chamber



Step3: Mark the marking on cup horizontally & Vertically with pencil depend on the required size of Lamp needed. Using scissors cut the paper cup from marking & Further cut the vertically in small small strips, further fold the strips of paper cups.

Step 4: Assemble all the prepared cups.



Step7: Add the light source by using small bulb holder & Lamp of paper cups is ready



2. Department of Prosthodontics, Crown and Bridge

RECYCLING DISCARDED WAXES IN PROSTHODONTICS

Objective of the Practice

The primary objective of this practice is to recycle and repurpose discarded waxes in the Department of Prosthodontics, ultimately promoting sustainability and reducing waste. By melting and reforming discarded waxes into usable sheets or preformed occlusal rims, we aim to minimize resource consumption and contribute to environmentally responsible practices.

The Context

In the field of prosthodontics, significant amounts of wax are used in various procedures, resulting in a considerable volume of discarded wax. Instead of allowing this wax to contribute to waste, the Department of Prosthodontics is implementing a sustainable practice to recycle and reuse these materials.

The Practice

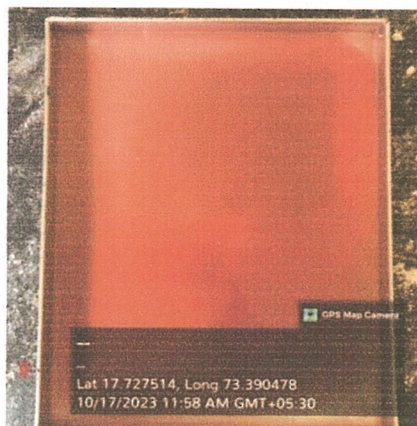
Step 1: Collection and Segregation:

Discarded waxes from prosthodontic procedures are collected and segregated based on their type and quality.



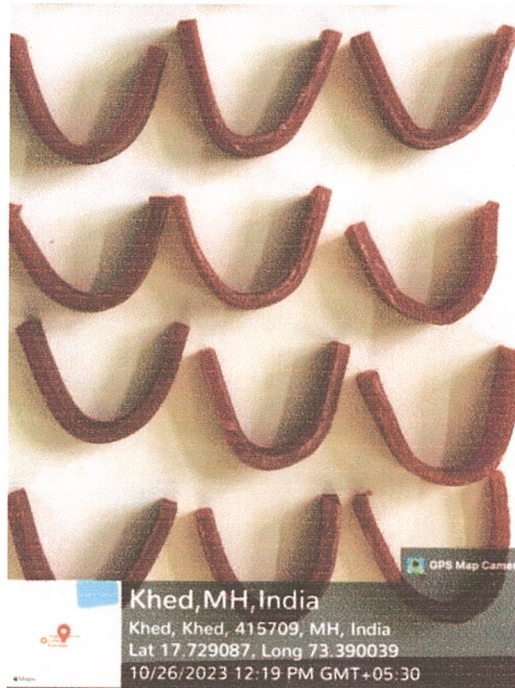
Step 2: Melting and Purification:

The segregated waxes are melted and purified to remove any impurities, ensuring a clean and consistent material.



Step 3: Reforming into Sheets or Preformed Occlusal Rims:

The purified wax is then shaped into sheets or preformed occlusal rims, making it suitable for reuse in various prosthodontic procedures.



Step 4: Inventory Management:

An inventory system is established to track the recycled wax materials and their availability for use in future prosthodontic treatments.

Evidence of Success

1. **Environmental Impact:** Reduced waste and lower demand for virgin wax, resulting in a positive environmental impact by conserving resources and reducing the department's ecological footprint.
2. **Cost Savings:** Savings in material costs by reusing recycled wax, contributing to cost-efficiency within the department.
3. **Enhanced Sustainability:** Promoting a culture of sustainability within the department and demonstrating a commitment to responsible resource management.

Problems Encountered and Resources Required

1. **Problems Encountered:** Challenges in achieving consistent quality and purity during the melting and purification process.
2. **Resources Required:-** Dedicated recycling and processing equipment (e.g., wax melting apparatus, purification tools).
3. **Training programs** for department staff to ensure proper understanding and implementation of the recycling process.
4. **Educational materials and awareness campaigns** to highlight the benefits of recycling and encourage participation.

This best practice plan will be regularly reviewed and updated to optimize efficiency, address challenges, and further enhance sustainability in the Department of Prosthodontics.

3. DEPARTMENT OF ORAL PATHOLOGY AND MICROBIOLOGY

RECYCLING AND REUSING THE SUBMITTED WAX TOOTH CARVINGS AND DISPOSED WAX WASTE.

1. Title of the practice

Recycling and reusing the submitted wax tooth carvings and disposed wax waste.

2. Objectives of the practice

The objective of this practice is to reduce the carving wax waste and reuse it by means of recycling. This will also augment the institution's green campus strategy by being more environment friendly.

3. The context

Every academic year, the students of I BDS are required to carve all the permanent teeth using carving wax as a part of their practical curriculum of Dental Anatomy, Embryology and Dental Histology. They also must carve teeth as part of their practical examination. Thus, there is accumulation of a lot of submitted wax carvings as well as waste wax in the department waste collecting bins. This wax is then disposed of by the waste management and disposal facilities of the institution. This wax, if melted at high temperatures and then purified, can be remade into wax blocks, and used again by the students. The above-mentioned practice of reuse and recycling this waste wax is aimed at making the best use of this otherwise waste wax.

4. The practice

The department of Oral Pathology and Microbiology collects all the waste carving wax in a specific container kept in the department. This collection continues throughout the month. The students are also encouraged to collect all the waste wax from their hostel rooms and deposit it in the above-mentioned container in case they are doing the carving exercises in the hostel after college hours. It is ensured by the teaching and non-teaching staff that the container has only the wax shavings and the submitted wax carvings and no other debris or waste products to avoid contamination.

At the end of every month, this waste wax is subjected to high temperatures and subsequently melted. It is then purified to remove contaminants, if any. The melted wax is then poured into cuboidal molds and allowed to cool. Thus, new carving blocks are made available by recycling the waste wax. These new carving wax blocks can be used by the staff for giving demonstrations, or by the students as and when needed.

5. Evidence of success

The new, recycled wax blocks have comparable physical properties to the original wax blocks and have been successfully used by the staff for giving demonstrations as well as by the students as and when needed.

This has also considerably reduced the waste output of the department and contributed to the green campus strategy of the institution.

6. Problems encountered and Resources required

The melting and purification of the waste wax is a technique sensitive and time-consuming process.

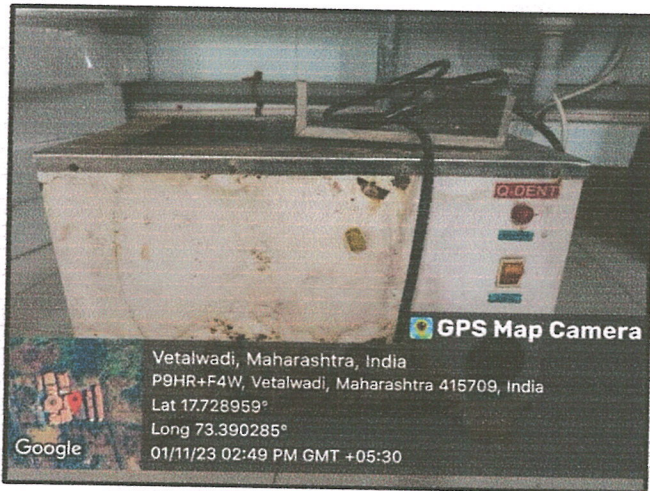
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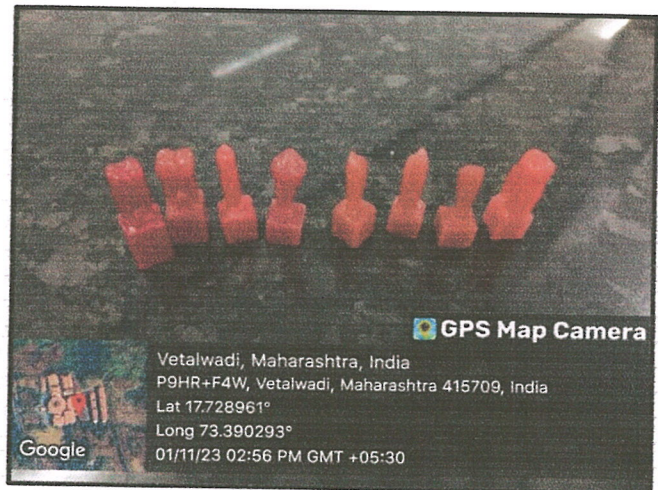
Waste wax created during carving by the students in the department



Collection of the waste wax



Water bath used for melting the waste wax



Carvings done using the recycled wax

4. DEPARTMENT OF ORTHODONTICS AND DENTOFACIAL ORTHOPAEDICS

RECYCLING DISCARDED METAL WASTE IN ORTHODONTICS

1. Title of the Practice

Recycling discarded metal waste for making Orthodontic wires and Diagnostic instruments.

2. Objective of the Practice

The primary objective of recycling orthodontic wires is to reduce environmental impact by reusing materials, minimizing the need for new resource extraction, and promoting sustainability in the dental industry.

3. The Context

Orthodontic wires often made of metal alloys, can be collected after use, processed, and reintegrated into the manufacturing cycle. By doing so, the dental field aims to reduce the demand for new raw materials, decrease energy consumption associated with metal production, and minimise the environmental impact of orthodontic treatments.

4. The Practice

4.1 Collection and Segregation:

Discarded metal waste from Orthodontic preclinical/ clinical procedures are collected and segregated into wires, brackets, etc.



4.2 Melting and Purification:

The process of melting and purifying Orthodontic metal waste involves heating the collected waste to a high temperature to melt the metal alloys. During melting, impurities are separated, and the molten metal is purified. This purified material can then be used to manufacture new orthodontic wires or other metal products.

4.3 Inventory Management:

An inventory system is established to track the recycled materials and their availability for use in future orthodontic treatments.

5. Evidence of Success:

5.1 Environmental Impact:

Reduced waste and lower demand for metal products, resulting in a positive environmental impact by conserving resources and reducing the department's ecological footprint.

5.2 Cost Savings:

Savings in material costs by reusing recycled metal products, contributing to cost- efficiency within the department.

5.3 Enhanced Sustainability:

Promoting a culture of sustainability within the department and demonstrating a commitment to responsible resource management.

6. Problems Encountered and Resources Required

6.1 Problems Encountered:

- Challenges in achieving consistent quality and purity during the melting and purification process.

6.2 Resources Required:

- Facilities equipped with furnaces and machinery for melting, purifying, and shaping the recycled materials into usable forms, such as new orthodontic wires or other metal products.
- Educational materials and awareness campaigns to highlight the benefits of recycling and encourage participation.

This best practice plan will be regularly reviewed and updated to optimize efficiency, address challenges, and further enhance sustainability in the Department of Orthodontics.

Best Practice No. 2

SPECIAL CARE FOR SPECIAL SMILES

BEST PRACTICE OF DEPARTMENT OF PAEDIATRIC AND PREVENTIVE DENTISTRY

- 1) **Title** – “Special Care for Special Smiles”
- 2) **Objectives of the Practice** – Special children/Differently Abled children, by definition, are part of the spectrum of patients under the purview of Pediatric Dentistry. This is not a clinical diagnosis, but a grouping established for the purpose of planning treatment. This is a substantial population group, including those who are Mentally / Physically / Medically / Genetically / Emotionally Challenged, as well as those with Learning Disabilities. There is a general agreement, that the population with disabilities has higher rates of poor oral hygiene, Gingivitis, Periodontitis and Dental Caries than the general population. Unfortunately, they receive the least dental care. This is because these patients often pose a formidable challenge to the delivery of dental care.

Hence, the objective of this Best Practice is to establish a Dedicated Unit, with availability of specially trained professionals, and all the necessary facilities and equipments required for treating this underprivileged patient group.

- 3) **The Context** – Generally, there are numerous challenges faced by this patient group in their efforts to obtain adequate dental care, such as (a) insufficient training/reluctance of dental practitioners (b) long durations of time required (c) lack of motivation/fear on part of the patient (d) disruption caused to appointments of other patients (e) financial limitations (f) commuting difficulties. Since YDCH is situated in a rural area, all these challenges are magnified many times.
- 4) **The Practice** – (a) Our department has encouraged and trained the Post-Graduate students for the priority treatment of these patients (b) PG students are instructed to keep exclusive, long treatment sessions for these patients - to allow adequate time, and prevent schedule disruption (c) Also, a separate dental unit contained in a separate room, has been earmarked for the treatment of those patients, who require treatment in isolation (d) PG students are given special training in understanding the psychology and managing the behaviour of these patients. A Conscious Sedation unit has been installed in the department, which is a valuable tool for behaviour management of certain anxious patients. (e) the treatment charges are kept at a bare minimum, so as to help the financially weaker parents to pay for the treatment. Often further concessions are also considered on a case-to-case basis. (f) A free bus service has been started by the institute. This bus has been made more accessible for Special Children, so that they can utilize the facility.
- 5) **Evidence of success** – The Best Practice has slowly yielded good results. As word of mouth got around, more and more of these patients are availing these services. The Department has successfully managed 30 such cases in the current calendar year. We have managed a wide variety of patients from this group, such as Crouzon Syndrome, patients with Cardiac Abnormalities, Autistic children, Visually Impaired children, Cleft patients, Epileptic patients, Down Syndrome cases, ADHD (Attention-Deficit Hyperactivity Disorder) patients, etc.

SHIVTEJ AROGYA SEVA SANSTHA'S

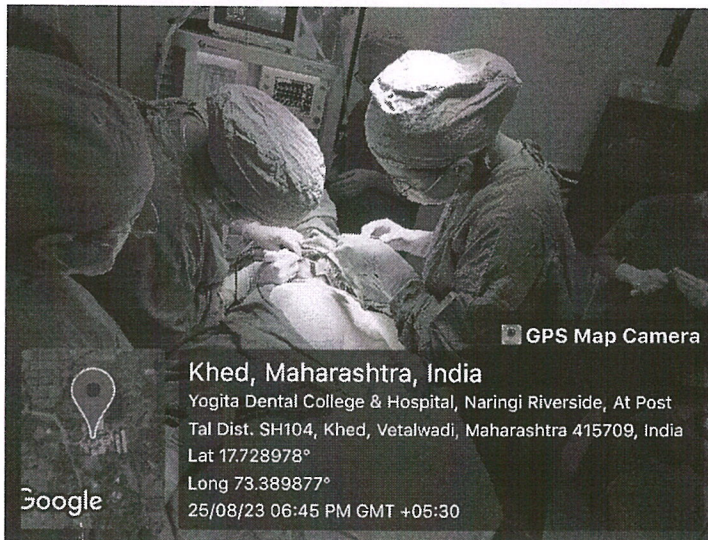
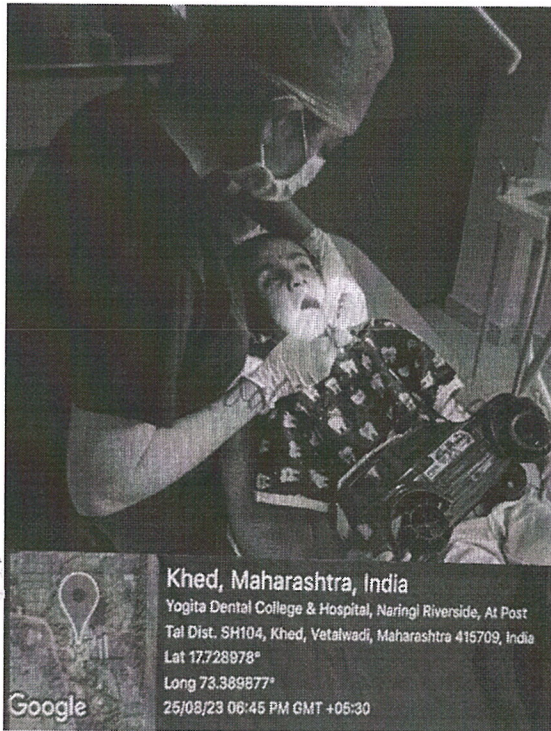


YOGITA DENTAL COLLEGE AND HOSPITAL

REGD.NO.MAH/F/-1588/RATNAGIRI

(Recognized by Dental Council of India, New Delhi & Affiliated to Maharashtra University of Health Science, Nashik)

DEPARTMENT OF PAEDIATRIC AND PREVENTIVE DENTISTRY



Best Practice No. 3

COLOUR CODED SYRINGES FOR DIFFERENT SOLUTIONS

YOGITA DENTAL COLLEGE AND HOSPITAL KHED

DEPARTMENT OF CONSERVATIVE DENTISTRY AND ENDODONTICS

COLOUR CODED SYRINGES FOR DIFFERENT SOLUTIONS

1. Title of the Practice- Different colour coded Syringes used in DEPARTMENT OF CONSERVATIVE DENTISTRY AND ENDODONTICS.

2. Objectives of the Practice

- The main objective of this practices is to avoid the confusion regarding differentiation of various solutions used in the department such as sodium hypochloride as a irrigating solution, injectible local anaesthetic such as lignocain hydrochloride, normal saline and chlorhexidine .

Other than that attention has been given to avoiding accidental injection of sodium hypochloride instead of local anaesthetics because of the same physical appearance of both the solutions.

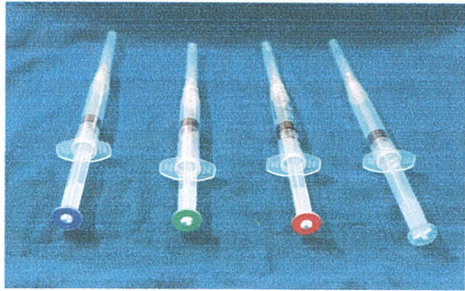
Another objective is to avoid sodium hypochloride accidents in the clinical practice.

3. The Context





- Deciding the color codes for different syringes used for solutions were one challenge has to be addressed

- Students newly exposed to clinical practice and non teaching staff took so much of time to understand the color code system for syringes

- There are so many solutions and medicated pastes comes in syringe form which has been already used in department sometimes a person can get confuse amongst these syringes



COLOUR CODING SYSTEM

-  Local Anaesthesia
-  Sodium Hypochlorite
-  Normal Saline
-  Chlorhexidine

Guided by :- Dr. Umesh Khanvilkar (Head of Department & Prof)
Dr. Siddesh Bandekar
(Reader) Dr. Shrin Kshirsagar (Reader)
Done by :- Trupti Shende , Anushka Waghmare , Ankit Verma,
Amit Yadav, Manasi Sohani , Naif Multa , Sandhyarani Khot

4. The Practice

- We are able to differentiate between different solutions that are used in department while doing patients as it has various color codes such as –

Red – sodium hypochloride

Green – local anaesthetic

White – normal saline

Blue- chlorhexidine

-It made the practice more convenient and reliable in all aspect



5. Evidence of Success

- After using this color coded syringes we observed that no incidence of hypochlorite incident has happened as such
- complications that happens because of confusion of solutions while working has been rarely seen due to color coding system.
- Everyone in department including non teaching staff and students who are newly exposed to practice positively implementing the color coded syringes

6. Problems Encountered and Resources Required



- Deciding the colour codes for the specific solution was bit challenging as it has to be more specific in concern with disposal and disintegration of syringes.
- Educating nonteaching staff and students from the third years who are newly exposed to clinical practice, was difficult.
- While implementing there were some issues faced by us like improper disposal of colour coded syringes to the various color coded disposable containers.

7. Notes (Optional)

-For implementation of color coded syringes in practices we made educating charts, seminars and conducted workshops

**DEPARTMENT OF CONSERVATIVE DENTISTRY
& ENDODONTICS**

WHY???
WHY IS COLOR CODING SO IMPORTANT ??
HERE LET'S SEE WHY IT IS ...





Here in, during the procedure the dentist may get confused due to the same physical appearance of LA , NaOCl and normal saline. Accidental swapping is very easily possible, leading to mishaps

Now in this scenario, all the syringes are properly and accurately color coded. so now, during the ongoing procedure, differentiate between them. The chances of accidents now have the least possibility.

INSTRUCTIONS:

1. Starting of with most important step is to know and have knowledge about the colour coded syringes.
2. How to use :
 - Before starting of the procedure, make sure to know the colour coding of the respective solutions. [Sodium hypochlorite- RED]
 - While preparing the tray, make sure to pick the color coded stickers and stick them on the PLUNGER of the syringes.
3. Why are we doing this :-
 - To avoid accidental injection of sodium hypochlorite instead of Local anaesthesia.
 - To differentiate between all the liquids that have same physical appearance .



IMPORTANT NOTE :- Educate yourself well enough and know all the colour coding by heart.

[same as the picture above here.]

- Once you stick the sticker on the plunger. Don't forget to sterilize the plunger with spirit.
- Post sterilizing the plunger now, fill in the syringes accordingly. [colour coding]

Guided by :- Dr. Unmesh Khanvilkar (Head of Department & Prof.)
Dr. Siddhesh Bandekar (Reader) Dr. Shirin Kshirsagar (Reader)

Done by :- Trupti Shende , Anushka Waghmare , Ankit Verma,
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