

## Existing Situation of Early Childhood Caries (ECC) in Pakistan and the Way Forward

### Current Scenario:

In Pakistan, Early Childhood Caries (ECC) poses a significant challenge, affecting young children's oral health, with high prevalence and no surveillance mechanism in the Primary Healthcare network in the country.

### High Prevalence:

- The prevalence has been reported to be in the range of 26.5% to 54% (1-5), however, only one of these studies is community-based (2).

### Risk Factors:

- Various factors contribute to ECC, including feeding practices and maternal determinants.
  - **Feeding Practices Impact:** Bottle-fed children have a higher ECC prevalence (72.25%) compared to breastfed children (51.6%). Nighttime bottle use exacerbates the risk (3-5).
  - **Milk with Sugar:** Children who consumed milk with sugar at night had more caries (89%) compared to those who did not (5).
  - **Maternal Education:** Children of educated mothers experience lower ECC rates (10%) compared to those of illiterate mothers (56%). (1,2)

### Challenges:

- **Educational Gap:** Inadequate training of dental professionals in the management of ECC.
- **Awareness Gap:** Insufficient awareness about ECC prevention and oral hygiene practices, among healthcare professionals and the general population.
  - **Nutritional Habits:** Consumption of milk with added sugar contributes to ECC.
  - **Neglect of Primary Teeth:** Recognizing the importance of maintaining healthy primary teeth.
- **Surveillance:** Recognizing the need for an innovative and robust surveillance system.

### The Way Forward:

#### Education:

- Only recently (2020), Pediatric Dentistry has been made a compulsory subject in undergraduate dental training. Pakistan Medical and Dental Council (PMDC) has only last month initiated the process of updating and revising the undergraduate dental curriculum.
- This provides a window of opportunity to develop a position paper on ECC and its management including minimum invasive techniques and behavioral management. Once the position paper is developed, an advocacy campaign may be launched to have that included in the curriculum.

#### Awareness:

#### Healthcare Professionals:

- Pediatricians, doctors, antenatal and postnatal healthcare workers, and vaccinators are the first persons to come in contact with a child and her mother and therefore, are in a better position than a dentist to impart awareness of oral health as well as screening and referral for treatment (5).

- These professionals can play a pivotal role in maternal guidance, as expectant mothers and mothers of newborns are most conducive toward behavioral change (6).
- Short certifiable courses, similar to the one developed by a Pakistani Organization for the WHO on “Promoting oral health in primary health care settings “and available online (7) can be made for healthcare workers with a special focus on ECC.
- These courses can then be promoted through professional organizations and dissemination in conferences and symposia.

#### **Maternal Guidance:**

- **Antenatal Education:** Educate expectant mothers about ECC prevention during pregnancy.
- **Postnatal Support:** Guide feeding practices, oral hygiene, and regular dental check-ups.
- Handouts can be created and disseminated.

#### **Community Involvement:**

- **Health Workers:** Train community health workers (Ladt Health Workers) to disseminate ECC-related information
- **Public Campaigns:** Launch targeted awareness campaigns emphasizing ECC prevention, proper oral hygiene, and the role of parents.
- **School Programs:** Introduce oral health education in schools to empower children and parents (8).

#### **Surveillance:**

- Pakistan has an established Primary Healthcare Network with over 6000 Basic Health Units and a similar number of MCH Centers, however, dental coverage is available in 550-odd Rural Health Centers which are the first referral level. This leaves a considerable proportion of the rural and vulnerable population without any dental cover.
- As a first step, Primary Healthcare workers and school teachers can be trained in surveillance of ECC using wooden spatulas. This simplified method has been tested in Pakistan and is now accepted by WHO (7).
- At a later stage, further training of these workers can lead to task shifting of primary dental care by non-invasive or minimally invasive methods by these professionals.

#### **Research and Data Collection:**

There is a dire need to conduct studies to monitor ECC trends, risk factors, and the effectiveness of preventive measures in the local context.

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