Oral Health Programme
Ministry of Health Malaysia

# 2020 ANNUAL REPORT

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# *Foreword*

***Principal Director of Oral Health***
***Ministry of Health Malaysia***

First and foremost the Oral Health Programme, Ministry of Health would like to record our appreciation and gratitude to *YBrs.* Dr Doreyat Bin Jemun, former Principal Director of Oral Health who had spearheaded this programme before his retirement on 29 March 2020.

The year 2020 has been extremely challenging with the COVID-19 pandemic impacting both lives and livelihoods worldwide. Like others, the oral healthcare service delivery was made to adhere to the new norms to ensure the safety of patients and oral health personnel at all times.

Existing dental clinics face various difficulties in providing services due to the constraints of space to screen and isolate patients. Various measures were implemented to ensure that optimum and safe services are delivered to the public. Special counters have been set up at all facilities to screen patients who are at risk of COVID-19 before they receive dental treatment. Patients were encouraged to make appointments before visiting the dental clinics to avoid congestion at the clinic waiting areas.

All Aerosol Generating Prosedures (AGP) during routine dental care such as restorative work and scaling are categorised as high-risk procedures. Several guidelines in managing COVID-19 and reducing the risk of transmission at all MOH dental facilities have been developed. These guidelines emphasise the importance of triaging patients at entry points of all dental clinics, followed by strict adherence to infection prevention and control measures by all oral healthcare workers.

This pandemic has also given oral health personnel opportunities to stand hand-in-hand and shoulder to shoulder with other health personnel in MOH and other agencies in combatting the scourge. Meanwhile, those working at the headquarters lend their hands at the Crisis Preparedness and Response Center (CPRC) to respond to any queries and provide information on COVID-19 to the public. When COVID-19 cases soared in Sabah, many dental personnel were mobilised along with health counterparts to Sabah to help fight and control the spread of COVID-19 amongst their communities.

Some major issues and challenges were identifed at the end of 2020 including slow trending of caries improvement, increasing trend of periodontal disease and late stage of oral cancer detection. The National Health Morbidity Survey, 2019 found a decrease in oral healthcare utilisation, with only 23.7 per cent of the population reportedly visited dental clinics within the last 12 months.

The utilisation trend was even more affected with the restriction in movement and the new norms practice in dental facilities due to the COVID-19 pandemic. Hence, digitalisation of the oral healthcare service system is crucial and timely during this pandemic era.

Throughout the year 2020, the Oral Health Programme continued its efforts in empowering the public on the importance of oral health. Creative approaches using online methods and social media have been identified as appropriate mechanisms to deliver oral health messages and conduct oral health education activities during the pandemic.

Several landmark events were held in 2020. A Town Hall session was organised on 10 February 2020 to provide a platform for our oral health personnel to raise pertinent service and work issues to the Minister and MOH top management. This was followed by the Oral Health Quality Convention held in Summit Hotel, USJ on 9 to 10 March 2020. The Stance Wheel innovation from Perlis which was sucessfully commercialised by the Medical Apparatus Supplies Sdn. Bhd. (MASSB) was the main showcase during the convention.

We anticipate that 2021 will be another challenging year for the healthcare service delivery which is still heavily affected and shaken by the COVID-19 pandemic. Notwithstanding, we shall continue to serve the Malaysian people at the utmost best of our capacity, without compromising on safety measures to reduce and prevent COVID-19 infection.

**YBHG. DR NOORMI BINTI OTHMAN**
**PRINCIPAL DIRECTOR OF ORAL HEALTH**
**MINISTRY OF HEALTH MALAYSIA**

# VISION OF THE MINISTRY OF HEALTH

A nation working together for better health.

# MISSION OF THE MINISTRY OF HEALTH

To lead and work in partnership.

To facilitate and support the people to:

- Attain fully their potential in health
- Appreciate health as a valuable asset
- Take individual responsibility and positive action for their health

To ensure a high quality system that is:

- Equitable
- Affordable
- Efficient
- Technologically appropriate
- Environmentally adaptable
- Customer centered
- Innovative

With emphasis on:

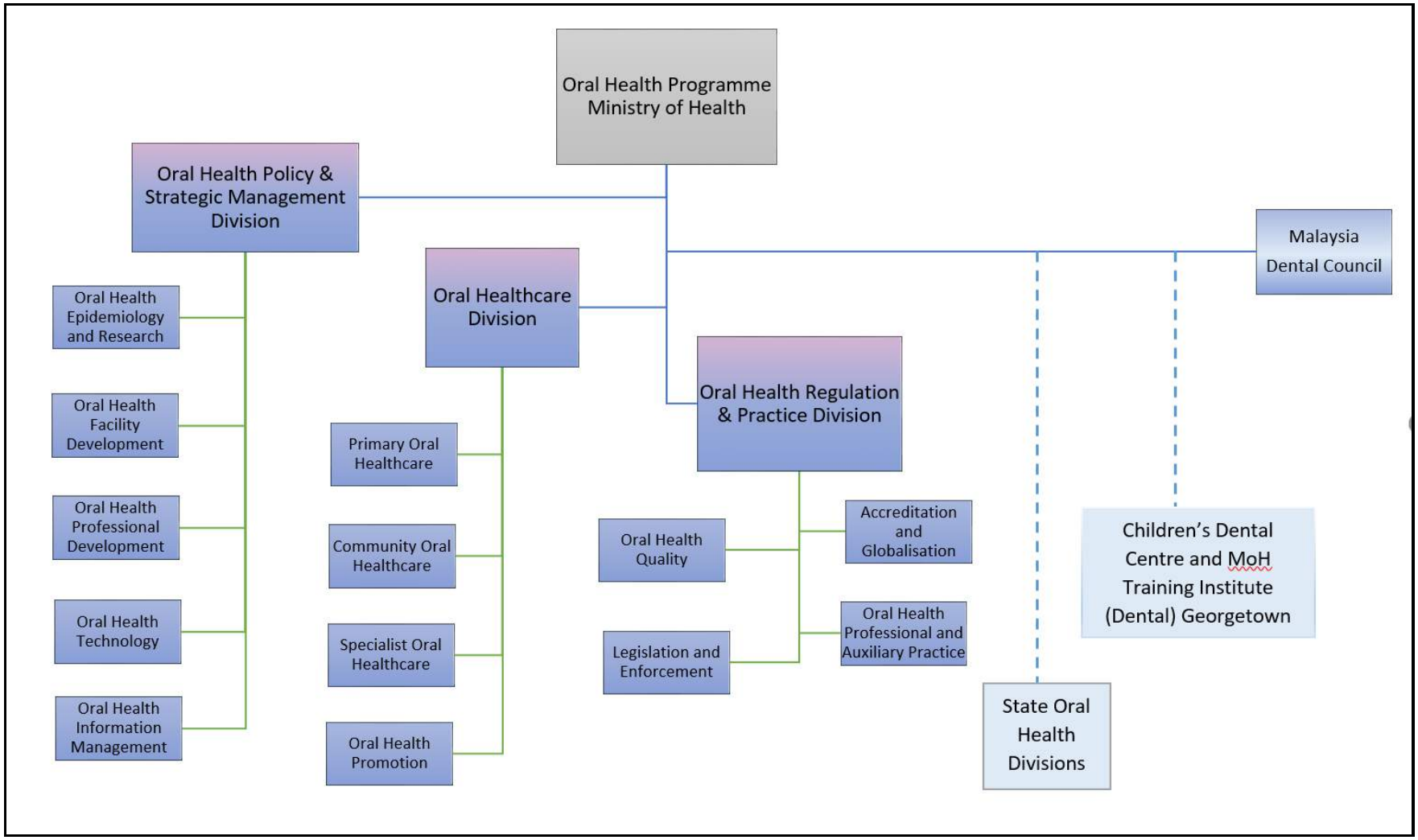
- Professionalism, caring and teamwork value
- Respect for human dignity
- Community participatio

# OBJECTIVE OF THE ORAL HEALTH PROGRAMME

To improve the oral health status of Malaysians through collaboration with stakeholders of public and private sectors in promoting oral healthcare, clinical prevention, treatment and rehabilitation with emphasis on identified priority groups, including marginalised and vulnerable populations in such a way that the oral health status of the people will continually be in conformity with the socio-economic progress of the country.

# ORGANISATION STRUCTURE

## ORAL HEALTH PROGRAMME, MINISTRY OF HEALTH MALAYSIA



# RESOURCE MANAGEMENT

## FINANCIAL RESOURCE MANAGEMENT

### Budget Management

For the year 2020, the Oral Health Programme (OHP) received Operating and Development budget as follows:

- Operating Budget – RM989,974,600.00
- Development Budget – RM78,891,524.00

### Performance of Oral Health Programme Operating Budget

Almost 90 percent of the operating budget was for emolument whilst the rest was for delivery of services. The allocation received was 4.41 percent more of 2019 and 8.78 percent above that of 2017 **(Table 1).**

**Table 1:**
**Adjusted Operational Allocation, Oral Health Programme, 2010 to 2020**

| Year | Emolument (RM) | Services (RM) | Asset (RM) | Total (RM) |
|---|---|---|---|---|
| **2010** | 365,771,400.00 | 72,337,947.00 | 1,649,159.00 | 439,758,506.00 |
| **2011** | 425,297,450.00 | 92,502,300.00 | 3,350,000.00 | 521,149,750.00 |
| **2012** | 433,309,400.00 | 92,914,975.00 | 5,952,027.00 | 532,176,402.00 |
| **2013** | 517,050,700.00 | 94,499,420.00 | 5,678,281.00 | 617,228,401.00 |
| **2014** | 591,410,587.00 | 99,517,656.00 | 40,868,344.00 | 731,796,587.00 |
| **2015** | 664,549,726.00 | 105,619,709.00 | 36,521,728.00 | 806,691,163.00 |
| **2016** | 764,288,702.00 | 101,138,772.00 | - | 865,427,474.00 |
| **2017** | 815,182,671.00 | 98,947,857.00 | - | 914,130,528.00 |
| **2018** | 808,421,900.00 | 101,636,285.00 | - | 910,058,185.00 |
| **2019** | 843,683,100.00 | 104,483,376.00 | - | 948,166,476.00 |
| **2020** | 883,980,900.00 | 105,993,700.00 | - | 989,974,600.00 |

*Source: Account Division, MOH 2020*

A total of RM1,003,535,158.00 was allocated under the Existing Policy (*Dasar Sedia Ada)* and 99.99 percent of the allocation managed to be spent for administration and oral healthcare activities **(Table 2)**.

**Table 2:**
**Adjusted Budget Allocation & Expenditures, Oral Health Programme MOH, 2020**

| Activity | Program Code | Adjusted Allocation (RM) | Final Expenditures (RM) | % Final Expenditures |
|---|---|---|---|---|
| Administration Oral Healthcare | 040100 | 98,262,274.00 | 98,261,172.59 | 99.99% |
| Primary Oral Healthcare | 040200 | 672,497,525.00 | 672,497,382.02 | 99.99% |
| Community Oral Healthcare | 040300 | 59,245,693.00 | 59,245,595.39 | 99.99% |
| Specialist Care Oral Healthcare | 040400 | 173,529,666.00 | 173,529,565.40 | 99.99% |
| **TOTAL** | **040000** | **1,003,535,158.00** | **1,003,533,715.40** | **99.99%** |

*Source: Account Division, MOH 2020*

## Performance of Oral Health Programme, MOH (Headquarters) Budget

In 2020, the Oral Health Programme at MoH headquarters (HQ) received budget allocation as follows:

- Operational Budget - RM1,768,415.64
- Development Budget - RM2,696,014.39

The allocation and final expenditure under each code of activity is shown in **Table 3(a) and (b).**

**Table 3(a):**
**Adjusted Budget Allocations and Expenditures for Operational, Oral Health Programme, MOH (HQ), 2020**

| Activity | Activity Code | Adjusted Allocation (RM) | Final Expenditures (RM) | % Final Expenditures to Initial Allocations |
|---|---|---|---|---|
| Management of Oral Health | 040100 | 1,437,780.94 | 1,437,780.94 | 100.00% |
| e-ISO Quality Management System | 040100 | 17,630.30 | 17,630.30 | 100.00% |
| Primary Oral Healthcare | 040200 | 39,844.00 | 39,844.00 | 100.00% |
| Community Oral Healthcare | 040300 | 118,000.00 | 118,000.00 | 100.00% |
| Specialist Care Oral Healthcare | 040400 | 63,270.00 | 63,270.00 | 100.00% |
| MoH Innovation Award | 010100 | 15,836.40 | 15,836.40 | 100.00% |
| Low Value Assets | 010300 | 37,150.00 | 37,150.00 | 100.00% |
| Emergency Procurement | 022200 | 10,230.00 | 10,230.00 | 100.00% |
| Assets | 080800 | 28,674.00 | 28,674.00 | 100.00% |
| **Sub Total** | | **1,768,415.64** | **1,768,415.64** | **100.00%** |

*Source: Financial Unit, Oral Health Programme, MOH 2020*

**Table 3(b):**
**Adjusted Budget Allocations and Expenditures for Development, Oral Health Programme, MOH (HQ), 2020**

| Activity | Activity Code | Adjusted Allocation (RM) | Final Expenditures (RM) | % Final Expenditures to Initial Allocations |
|---|---|---|---|---|
| In-service Training | 00105 | 227,042.75 | 227,012.20 | 99.99% |
| Research & Development | 00500 | 330,171.00 | 330,168.54 | 99.99% |
| Renovation, Upgrade & Repair of Health Facilities | 00600 | 346,385.00 | 346,384.02 | 99.99% |
| Upgraded Medical Equipment & Non-Medical Equipment | 01100 | 24,000.00 | 23,808.00 | 99.20% |
| **Sub Total** | | **927,598.75** | **927,372.76** | **99.98%** |
| **Total** | | **2,696,014.39** | **2,695,788.40** | **99.99%** |

*Source: Financial Unit, Oral Health Programme, MOH 2020*

## Monitoring State Finances

The OHP (HQ) also monitored allocation and expenditure at state level. Under the Existing Policy (*Dasar Sedia Ada),* Selangor received the highest allocation, followed by Sarawak and Sabah. The expenditure of some (11/20) of the states and institutions exceed 100 percent due to the increase in emolument payments **(Table 4).**

**Table 4: Adjusted Budget Allocations and Expenditures under Existing Policies by State and Institution, 2020**

| State | Adjusted Allocation (RM) | Final Expenditure (RM) | % Final Expenditure to Initial Allocation |
|---|---|---|---|
| Perlis | 19,629,533.00 | 19,931,867.77 | 101.54% |
| Kedah | 64,354,888.00 | 65,397,938.94 | 101.62% |
| Pulau Pinang | 57,450,644.00 | 58,914,638.93 | 102.55% |
| Perak | 85,455,627.00 | 87,162,384.72 | 102.00% |
| Selangor | 100,987,655.40 | 100,669,572.39 | 99.69% |
| Negeri Sembilan | 56,413,293.00 | 58,705,397.34 | 104.06% |
| Melaka | 41,126,764.00 | 41,350,751.99 | 100.54% |
| Johor | 83,503,852.00 | 84,650,118.47 | 101.37% |
| Pahang | 71,996,424.00 | 74,262,664.68 | 103.15% |
| Terengganu | 61,966,790.37 | 64,538,956.66 | 104.15% |
| Kelantan | 73,403,717.00 | 75,257,006.19 | 102.52% |
| Sabah | 85,539,786.00 | 88,381,663.82 | 103.32% |
| Sarawak | 98,276,721.00 | 101,449,803.34 | 103.23% |
| FT KL & Putrajaya | 55,827,476.75 | 57,264,224.59 | 102.57% |
| FT Labuan | 4,037,689.00 | 4,241,228.04 | 105.04% |
| OHP MOH | 12,955,426.00 | 13,415,170.67 | 103.55% |
| *PPKK & KLPM* | 298,072.00 | 269,732.18 | 90.49% |
| HKL | 7,103,213.00 | 7,416,448.29 | 104.41% |
| IMR | 157,826.00 | 155,175.25 | 98.32% |
| IKN | 99,000.00 | 98,971.14 | 99.97% |
| **TOTAL** | **980,584,397.52** | **1,003,533,715.40** | **102.34%** |

*Source: Financial Unit, Oral Health Programme, MOH 2020*

## HUMAN RESOURCE MANAGEMENT

A successful health system depends on the provision of effective, efficient, accessible, sustainable and high quality services by a workforce that is sufficient in number, appropriately trained and equitably distributed.

### Dental Officer

There was an increase in the number of permanent posts and dental officers serving in MOH as compared with 2019. The percentage of filled posts was almost equal between Peninsular Malaysia and East Malaysia whilst Malacca had the highest number of vacant posts for officers **(Table 5 and 6)**.

**Table 5:**
**Status of Dental Officer Posts, 2016 to 2020**

| Year | P | F | Percent F |
|---|---|---|---|
| 2016 | 3,839 | 3,647 | 95.0 |
| 2017 | 3,839 | 3,418 | 89.0 |
| 2018 | 3,839 | 3,095 | 80.6 |
| 2019 | 3,847 | 3,051 | 79.3 |
| 2020 | 3,866 | 3,499 | 90.5 |

*P = Posts F= Filled*
*Source: Oral Health Programme, MOH*

**Table 6:**
**Status of Dental Officer Posts at State/ Hospital/Institution, 2020**

| State/ Hospital/ Institutions | P | F | % F |
|---|---|---|---|
| Perlis | 82 | 68 | 82.9 |
| Kedah | 267 | 233 | 87.3 |
| Pulau Pinang | 194 | 189 | 97.4 |
| ILKKM *(Pergigian)* | 37 | 36 | 97.3 |
| Perak | 325 | 298 | 91.7 |
| Selangor | 368 | 341 | 92.7 |
| FT KL & Putrajaya | 202 | 196 | 97.0 |
| Negeri Sembilan | 221 | 205 | 92.8 |
| Melaka | 188 | 147 | 78.2 |
| Johor | 371 | 341 | 91.9 |
| Pahang | 335 | 312 | 93.1 |
| Terengganu | 290 | 252 | 86.9 |
| Kelantan | 288 | 248 | 86.1 |
| Hospitals / Institutions | 80 | 79 | 98.8 |
| **Peninsular Malaysia** | **3248** | **2945** | **90.7** |
| Sabah | 274 | 258 | 94.2 |
| Sarawak | 332 | 285 | 85.8 |
| FT Labuan | 12 | 11 | 91.7 |
| **East Malaysia** | **618** | **554** | **89.6** |
| **TOTAL** | **3,866** | **3,499** | **90.5** |

*P = Posts F=Filled*
*Source: Oral Health Programme, MOH*

Starting 2017, all new dental officers in MOH were appointed on contract basis for a period of three years. The number of new dental officers appointed in 2020 was less than in the last three years **(Table 7)**.

**Table 7:**
**Contract New Dental Officers in MOH, 2017 to 2020**

| Cohort | Year | | | |
|---|---|---|---|---|
| | **2017** | **2018** | **2019** | **2020** |
| First cohort | 526 | 708 | 566 | 503 |
| Second cohort | 441 | 286 | 390 | 260 |
| Third cohort | 362 | 130 | 217 | 101 |
| **TOTAL** | **1,329** | **1,124** | **1,173** | **864** |

*Source: Oral Health Programme, MOH*

A total of 486 best talents from the 2017 cohort were appointed on a permanent basis into the service after their two (2) year contract period ended **(Table 8).**

**Table 8:**
**Contract Dental Officers Appointed on Permanent Basis in MOH**

| Cohort (2017) | Permanent Appointment | | |
|---|---|---|---|
| | **First exercise** | **Second exercise** | **Total** |
| First cohort (9 January 2017) | 161 | 20 | 181 |
| Second cohort (22 May 2017) | 142 | 17 | 159 |
| Third cohort (13 November 2017) | 128 | - | 128 |
| **TOTAL** | **431** | **37** | **468** |

*Source: Oral Health Programme, MOH*

## Attrition of Dental Officers

In 2020, a total of 864 new dental officers joined MoH on contract basis while 378 left the service due to various reasons, hence a total net gain of 486 officers **(Table 9)**.

**Table 9:**
**Nett Gain/Loss of Dental Officers in MOH, 2016 to 2020**

| Reasons | Year | | | | |
|---|---|---|---|---|---|
| | **2016** | **2017** | **2018** | **2019** | **2020** |
| New Intake | 880 | 1,329 | 1,124 | 1,173 | 864 |
| Attrition | | | | | |
| • Retired (Compulsory ) | 7 | 16 | 13 | 18 | 24 |
| • Retired (Optional) | 9 | 14 | 12 | 5 | 5 |
| • Resigned | 252 | 237 | 414 | 487 | 347 |
| • Released with Permission | 0 | 0 | 0 | 0 | 0 |
| • Other Reasons | 2 | 0 | 4 | 2 | 2 |
| Total | 270 | 267 | 443 | 512 | 378 |
| **Net Gain/Loss** | **610** | **1,062** | **681** | **661** | **486** |

*Source: Oral Health Programme, MOH*

## Dental Specialist

The number of clinical dental specialists increased from 301 (2019) to 328 (2020). However, the number of Dental Public Health Specialists continued to decline due to retirement and lack of new dental public health graduates entering the service **(Table 10).**

**Table 10:**
**Number of Dental Specialists in MOH, 2016 to 2020**

| Year | Hospital-Based | | | | | Non-Hospital-Based | | | | Total |
|---|---|---|---|---|---|---|---|---|---|---|
| | Oral & Maxillo-facial Surgery | Paediatric Dentistry | Oral Pathology & Oral Medicine | Special Needs Dentistry | Forensic Odontology | Orthodontic | Periodontics | Restorative Dentistry | Dental Public Health | |
| 2016 | 64 | 39 | 11 | 4 | 1 | 52 | 34 | 24 | 93 | **322** |
| 2017 | 75 | 38 | 15 | 4 | 1 | 64 | 36 | 28 | 90 | **351** |
| 2018 | 77 | 45 | 14 | 5 | 1 | 69 | 42 | 31 | 85 | **369** |
| 2019 | 81 | 46 | 15 | 6 | 2 | 70 | 44 | 37 | 80 | **381** |
| 2020 | 84 | 49 | 15 | 7 | 3 | 80 | 50 | 40 | 71 | **399** |

(*Exclude dental specialists undergoing gazzetement*)
*Source: Oral Health Programme, MOH*

The Programme received additional posts in 2020 to accomodate the increasing number of clinical specialists. In addition, the number of vacant posts for Dental Public Health (DPH) has been further increased due to high attrition **(Table 11)**. Distribution of posts and specialists according to state was shown in **Table 12**.

**Table 11:**
**Status of Dental Specialist Posts, 2016 to 2020**

| Year | Clinical Dental Specialist | | | DPH Specialist | | |
|---|---|---|---|---|---|---|
| | P | F | % F | P | F | % F |
| 2016 | 244 | 229 | 93.8 | 94 | 70 | 74.4 |
| 2017 | 244 | 261 | 106.9 | 94 | 90 | 95.7 |
| 2018 | 244 | 284 | 116.4 | 94 | 85 | 90.4 |
| 2019 | 244 | 301 | 123.4 | 94 | 80 | 85.1 |
| 2020 | 361 | 328 | 90.9 | 97 | 71 | 73.2 |

*P = Posts F=Filled*
*Source: Oral Health Programme, MOH*

**Table 12:**
**Status of Dental Specialist Posts at State/ Hospital/ Institution, 2020**

| State/ Hospital/ Institution | Clinical Dental Specialist | | | DPH Specialist | | |
|---|---|---|---|---|---|---|
| | P | F | % F | P | F | %F |
| Perlis | 6 | 6 | 100.0 | 2 | 0 | 0.0 |
| Kedah | 26 | 21 | 80.8 | 4 | 3 | 75.0 |
| Pulau Pinang | 24 | 23 | 95.8 | 4 | 2 | 50.0 |
| ILKKM *(Pergigian)* | 2 | 1 | 50.0 | 2 | 1 | 50.0 |
| Perak | 30 | 27 | 90.0 | 6 | 4 | 66.7 |

| State/ Hospital/ Institution | Clinical Dental Specialist | | | DPH Specialist | | |
|---|---|---|---|---|---|---|
| | P | F | % F | P | F | %F |
| Selangor | 47 | 43 | 91.5 | 11 | 7 | 63.6 |
| FT KL & Putrajaya | 29 | 26 | 89.7 | 5 | 3 | 60.0 |
| Negeri Sembilan | 28 | 21 | 75.0 | 4 | 2 | 50.0 |
| Melaka | 17 | 12 | 70.6 | 4 | 4 | 100.0 |
| Johor | 32 | 29 | 90.6 | 7 | 5 | 71.4 |
| Pahang | 26 | 22 | 84.6 | 4 | 4 | 100.0 |
| Terengganu | 14 | 14 | 100.0 | 3 | 3 | 100.0 |
| Kelantan | 17 | 19 | 111.8 | 6 | 4 | 66.7 |
| Hospitals /Institutions / Oral Health Programme | 15 | 18 | 120.0 | 27 | 24 | 88.9 |
| **Peninsular Malaysia** | **313** | **282** | **90.1** | **89** | **66** | **74.2** |
| Sabah | 28 | 22 | 78.6 | 5 | 2 | 40.0 |
| Sarawak | 22 | 24 | 109.1 | 3 | 3 | 100.0 |
| FT Labuan | 0 | 0 | 0 | 0 | 0 | 0 |
| **East Malaysia** | **50** | **46** | **92.0** | **8** | **5** | **62.5** |
| **Total** | **363** | **328** | **90.4** | **97** | **71** | **73.2** |

*P = Posts F=Filled*
*OHP = Oral Health Programme*
*Source: Oral Health Programme, MOH*

## Attrition of Dental Specialists

A total of 32 dental officers were gazetted as specialists in 2020 whilst 24 left the service due to various reasons; hence a net gain of eight (8) specialists. Net gain and losses of dental specialists from 2016 to 2020 are shown in **Table 13.**

**Table 13:**
**Gazettement and Attrition of Dental Specialists, 2016 to 2020**

| Gazetted / Attrition | Year | | | | |
|---|---|---|---|---|---|
| | 2016 | 2017 | 2018 | 2019 | 2020 |
| Gazetted as Specialist | 21 | 51 | 43 | 30 | 32 |
| **Attrition** | | | | | |
| Retired (Compulsory ) | 3 | 12 | 10 | 15 | 19 |
| Retired (Optional) | 3 | 6 | 4 | 1 | 2 |
| Resigned/ Released with Permission | 6 | 1 | 10 | 11 | 1 |
| Other Reasons | 0 | 0 | 2 *(contract)* | 1 | 2 |
| **Total** | **12** | **19** | **26** | **28** | **24** |
| **Net Gain/Loss** | **9** | **32** | **17** | **2** | **8** |

*Source: Oral Health Programme, MOH*

## Dental Auxiliaries and Support Staff

In 2019, more than 90 percent of permanent posts for dental auxiliaries and support staff have been filled **(Table 14)**. Almost 100 percent of these posts have been filled in Sabah, Sarawak and FT Labuan as compared to Peninsular Malaysia with the exception of state of Kelantan**.** Distribution of posts and auxilliaries is shown in **Table 15**.

**Table 14:**
**Status of Dental Auxiliaries Posts, 2020**

| Category | P | F | |
|---|---|---|---|
| | | No. | Percentage |
| Dental Therapist | 2977 | 2824 | 94.9 |
| Dental Technologist | 1023 | 948 | 92.7 |
| Dental Surgery Assistant | 4264 | 4024 | 94.4 |
| **TOTAL** | **8264** | **7796** | **94.3** |
| Supporting Staff | 1844 | 1705 | 92.5 |
| **TOTAL** | **10,108** | **9501** | **94.00** |

*P = Posts F=Filled*
*Source: Oral Health Programme, MOH*

**Table 15:**
**Status of Dental Auxiliaries Posts at State / Hospital /Institution, 2020**

| State/ Hospital/ Institution | D/Therapist | | | D/Technologist | | | DSA | | |
|---|---|---|---|---|---|---|---|---|---|
| | P | F | % F | P | F | % F | P | F | % F |
| Perlis | 61 | 60 | 98.4 | 22 | 22 | 100.0 | 93 | 85 | 91.4 |
| Kedah | 185 | 175 | 94.6 | 72 | 65 | 90.3 | 257 | 248 | 96.5 |
| Pulau Pinang | 182 | 178 | 97.8 | 43 | 39 | 90.7 | 266 | 252 | 94.7 |
| PPKK & ILKKM | 25 | 20 | 80.0 | 8 | 8 | 100.0 | 23 | 17 | 73.9 |
| Perak | 250 | 235 | 94.0 | 86 | 78 | 90.7 | 369 | 351 | 95.1 |
| Selangor | 248 | 235 | 94.8 | 101 | 87 | 86.1 | 421 | 386 | 91.7 |
| FT KL & Putrajaya | 146 | 139 | 95.2 | 50 | 44 | 88.0 | 265 | 234 | 88.3 |
| Negeri Sembilan | 141 | 135 | 95.7 | 59 | 53 | 89.8 | 233 | 215 | 92.3 |
| Melaka | 118 | 100 | 84.7 | 41 | 32 | 78.0 | 215 | 180 | 83.7 |
| Johor | 190 | 177 | 93.2 | 74 | 66 | 89.2 | 353 | 336 | 95.2 |
| Pahang | 209 | 202 | 96.7 | 65 | 61 | 93.8 | 338 | 316 | 93.5 |
| Terengganu | 160 | 154 | 96.3 | 79 | 75 | 94.9 | 304 | 297 | 97.7 |
| Kelantan | 201 | 198 | 98.5 | 79 | 79 | 100.0 | 251 | 250 | 99.6 |
| Hosp./Institutions | 28 | 26 | 92.9 | 13 | 12 | 92.3 | 63 | 55 | 87.3 |
| **Pen. Malaysia** | **2,144** | **2,034** | **94.9** | **792** | **721** | **91.0** | **3,451** | **3,222** | **93.4** |
| Sabah | 383 | 371 | 96.9 | 104 | 101 | 97.1 | 358 | 355 | 99.2 |
| Sarawak | 435 | 406 | 93.3 | 124 | 123 | 99.2 | 439 | 431 | 98.2 |
| FT Labuan | 15 | 13 | 86.7 | 3 | 3 | 100.0 | 16 | 16 | 100.0 |
| **East Malaysia** | **833** | **790** | **94.8** | **231** | **227** | **98.3** | **813** | **802** | **98.6** |
| **Total** | **2,977** | **2,824** | **94.9** | **1023** | **948** | **92.7** | **4,264** | **4,024** | **94.4** |

*P = Posts F=Filled DSA= Dental Surgery Assistant*
*(*Total number including "Jawatan Kumpulan")*
*Source: Oral Health Programme, MOH*

Since March 2019, all dental auxiliary trainees who graduated from the *Institut Latihan (Pergigian)* KKM, Penang were recruited on contract basis for a period of (2 + 2) years. A total of 57 Dental Technologists and 271 Dental Surgery Assistants in two (2) cohorts have been appointed respectively in 2020 **(Table 16)**.

**Table 16:**
**Contract Dental Auxilliaries in MoH, 2019 to 2020**

| Cohort | Dental Technologist | | Dental Surgery Assistant | |
|---|---|---|---|---|
| | **2019** | **2020** | **2019** | **2020** |
| First cohort | 29 | 42 | 124 | 138 |
| Second cohort | - | 15 | 123 | 133 |
| **TOTAL** | **29** | **57** | **247** | **271** |

*Source: Oral Health Programme, MOH*

All contract Dental Technologists from the first batch 2019 and 2020 and Dental Surgery Assistants from the first batch 2019 were successfully appointed on permanent basis after their two year contract ended **(Table 17).**

**Table 17:**
**Contract Dental Auxilliaries appointed on Permanent Basis in MoH, 2020**

| Cohort / Year | Dental Technologist | | Dental Surgery Assistant | |
|---|---|---|---|---|
| | **No.** | **Percentage** | **No.** | **Percentage** |
| Cohort 1/2019 | 29 | 100 | 124 | 100 |
| Cohort 2/2019 | - | - | - | - |
| Cohort 1/2020 | 42 | 100 | - | - |
| **TOTAL** | **71** | **100** | **124** | **-** |

*Source: Oral Health Programme, MOH*

## ORAL HEALTH FACILITY DEVELOPMENT

### Oral Health Facilities

The Oral Health Programme has a comprehensive network of oral healthcare facilities located at health clinics, standalone clinics, hospitals, schools and institutions to ensure that services can be delivered to the communities.

Oral healthcare services are also provided at the Urban Transformation Centres (UTC) and Rural Transformation Centres (RTC) facilities which were established by the Ministry of Finance (MoF) and operationalised by the MoH. The UTCs provide daily outpatient dental care services while the RTCs provide dental care services via the outreach programme.

The oral healthcare services were also delivered to the communities via Mobile Dental Clinics. There are various types of mobile dental clinics which include buses, trailers, lorries and caravans. In addition, the mobile dental teams [*Pasukan Pergigian Bergerak* (PPB)] provide outreach services to the schoolchildren and populations in sub-urban and remote areas.

In 2020, there were 1771 dental facilities in the MOH **(Table 18)** and 608 mobile dental teams with an estimated 3268 mobile dental units **(Table 19).**

**Table 18:**
**Oral Health Facilities in MOH, 2020**

| Facility Type | Facilities |
|---|---|
| Stand-alone Dental Clinic | 63 |
| Dental Clinics in Health Centres/KKIA | 586 |
| Dental Clinics in Hospitals | 75 |
| School Dental Clinics | 920 |
| Dental Clinics in Urban Transformation Centres (UTC)/ Rural Transformation Centres (RTC) | 26 |
| Others: IMR, Prisons, *Pusat Serenti*, Handicapped Children Centres, Children Spastic Centres, *Puspanita*, *Perbadanan* | 21 |
| **Total (Static facilities)** | **1691** |
| Mobile Dental Clinics | 36 |
| Mobile Dental Laboratories | 4 |
| **Total (Mobile facilities)** | **40** |
| **TOTAL** | **1771** |

*Source: Draf Taburan Fasiliti Kesihatan Pergigian 2020, Health Informatics Center, MOH*

**Table 19:**
**Mobile Dental Teams in MOH, 2020**

| Facility Type | Facilities | Dental Chairs |
|---|---|---|
| School Mobile Dental Teams (Primary and Secondary Schools) | 467 | 3268 (portable) |
| Pre-School Mobile Dental Teams | 137 | |
| Elderly & Special Needs Mobile Dental Teams | 4 | |
| **Total** | **608** | **3268** |

*Source: Data Taburan Fasiliti Kesihatan Pergigian 2020*

### Oral Health Development Project Under The Malaysia Plan (MP)

- **Development Projects Under the 11th and 12th Malaysia Plan**

In the year 2020, there were twelve (12) dental health development projects approved under the 10th MP and 11th MP. Those currently under development are as follows: -

Standalone Dental Clinics:

1. *Klinik Bukit Selambau, Kedah*
2. *Upgrading of Klinik Pergigian Tronoh, Kinta, Perak*
3. *Klinik Pergigian Tanjung Karang dan Pejabat Kesihatan Pergigian Daerah, Kuala Selangor, Selangor*
4. *Upgrading of of Klinik Pergigian Kluang, Johor*
5. *Klinik Pergigian Pasir Akar, Besut, Terengganu*
6. *Klinik Pergigian Daro, Mukah, Sarawak*
7. *Pusat Pakar Pergigian Seremban, Negeri Sembilan*
8. *Pusat Pakar Pergigian Kota Kinabalu, Sabah*
9. *Klinik Kesihatan (Jenis 3) Dan Pusat Pakar Pergigian Presint 6, Putrajaya*
10. Upgrading of *Jabatan Pergigian Pediatrik, Hospital Melaka, Melaka*
11. *Kuarters Klinik Pergigian Chiku 3, Gua Musang, Kelantan*
12. Upgrading of six (6) *Klinik Kesihatan (Jenis 5) with no dental component in Sarawak*

- **Development Projects under Public-Private Initiatives (PPI)**

Besides the MP projects, there are four (4) non-MP Projects under the Public-Private Initiatives as follows;

1. Redevelopment of *Klinik Pergigian Cahaya Suria (Pusat Pakar Pergigian Kuala Lumpur)*
2. Redevelopment of *Klinik Pergigian at Klinik Kesihatan Dato' Keramat*
3. Land Swap project of *Klinik Pergigian Bangsar*
4. Hospital Cyberjaya

- **Norms And Guidelines for New Facilities**

*Medical Brief of Requirements (MBoR)*, Standard List of Equipment as well as Specifications of Equipment for new dental facilities were reviewed and updated as below:

Medical Brief of Requirement (MBoR);

1. *Klinik Pergigian Berpakar di Klinik Kesihatan Jenis 1, 2 & 3*
2. *Pejabat Kesihatan Pergigian Daerah*
3. *Pusat Pakar Pergigian* Kuala Lumpur

Standard List of Equipment for;

1. *Klinik Pergigian Primer*
2. *Klinik Pakar Pergigian*
3. *Pasukan Pergigian Bergerak*

Specifications of Equipment for;

1. Specifications of Heavy Equipment (List 1 – For Dental Facilities)
2. Specifications of Dental Laboratory Equipment
3. Specification of Specialist Equipment

(Cone Beam Computer Tomography, Orthopantomogram (OPG) & Cephalometric X-Ray Unit, Drill and Saw, Surgical Micromotor, Intraoral X-Ray, Dental Operating Microscope, Intraoral Scanner, Nitrous Oxide Machine and Mobile Dental Cutting Unit (OT use)

- **Privatisation of Clinic Support Services / *Perkhidmatan Sokongan Klinik* (PSK)**

Monitoring activities for the implementation of the Medical Equipment Enhancement Tenure (MEET) programme by Quantum Medical Solutions (QMS) at Health Clinics and Dental Clinics were conducted through MEET Technical Audit.

In 2020, the National Audit had audited *Klinik Kesihatan* and *Klinik Pergigian Taiping*. This activity was coordinated by the MoH Engineering Services Division in collaboration with Oral Health Programme and the State Health Department.

Contracts for PSK in seven (7) states namely Kedah, Penang, Perak, Melaka, Johor, Kelantan and Selangor will end in 2021 whereas contracts for the states of Perlis, Negeri Sembilan, Federal Territory of Kuala Lumpur & Putrajaya, Pahang, Terengganu and Sabah will end in 2022. The new contract for the state of Sarawak commenced on 1 December 2020 until 30 November 2023.

Expansion of Clinical Support Services under the PSK Project Expansion Plan (phase 2) was recommended for 55 Health Clinics. Approval has been received involving 3 states, namely, Federal Territory of Kuala Lumpur, Kelantan and Sarawak. A total of 11 clinics have received the expansion of the PSK Project, namely:

1. Klinik Kesihatan Kampung Pandan, FT Kuala Lumpur & Putrajaya
2. Klinik Kesihatan Petaling Bahagia, FT Kuala Lumpur & Putrajaya
3. Klinik Kesihatan Pengkalan Chepa, Kelantan
4. Klinik Kesihatan Bachok, Kelantan
5. Klinik Kesihatan Gua Musang, Kelantan
6. Klinik Kesihatan Kuala Balah, Kelantan
7. Klinik Kesihatan Pasir Mas, Kelantan
8. Klinik Kesihatan Sibu Jaya, Sarawak
9. Klinik Kesihatan Batu Niah, Sarawak
10. Klinik Kesihatan Jepak, Sarawak
11. Klinik Kesihatan Siburan, Sarawak

# ACTIVITIES AND ACHIEVEMENTS

## Oral Health Policy and Strategic Planning Division

## ORAL HEALTH EPIDEMIOLOGY AND RESEARCH

Oral health research activities and management of the oral health research agenda were carried out to provide evidence to support existing oral health policy and decision-making. Dissemination of research projects findings has been carried out through various platforms. Throughout 2020, various activities were undertaken in collaboration with other agencies within and outside Ministry of Health (MOH) either at National or State level.

### National Level Research Projects and Initiatives

- **National Health and Morbidity Survey 2020: National Oral Health Survey of Adults 2020 (NHMS 2020: NOHSA 2020)**

The 4th National Oral Health Survey of Adults, which is under the cluster of National Health and Morbidity Survey, aim to assess the oral health status and treatment needs of Malaysian adults aged from 15 years and above and; to describe the socio-dental aspects in relation to their oral health. Among the activities that were conducted in 2020 as in **Table 20**. However, the survey was postponed due to COVID-19 pandemic and will resume once the pandemic situation is under control.

**Table 20:**
**NHMS 2020: NOHSA Activities**

<table>
<tr><th>No.</th><th>Name of Activities</th><th>Date/ Venue</th><th>Description of Activities</th></tr>
<tr><td>1.</td><td>Discussion Session among Gold Standard Examiner and Benchmark Examiner</td><td>• 6 January 2020<br>• Oral Health Programme, MOH</td><td>• Discussion on clinical periodontal disease criteria and<br>• Briefing on the conduct of the periodontal disease calibration session were done.</td></tr>
<tr><td>2.</td><td>Briefing on Calibration with State Host Calibration Zone</td><td>• 13 January 2020<br>• Oral Health Programme, MOH</td><td>• All six zone host coordinators attended.<br>• Briefing on the role of calibration state host was done.<br>• The agreement date for calibration for the 6 zones were as following:
<table>
<tr><th>Zone</th><th>State</th><th>Date</th></tr>
<tr><td>Zone 1</td><td>Sabah</td><td>17 to 21 February</td></tr>
<tr><td>Zone 2</td><td>Kedah</td><td>1 to 5 March</td></tr>
<tr><td>Zone 3</td><td>Kelantan</td><td>8 to 12 March</td></tr>
<tr><td>Zone 4</td><td>Perak</td><td>23 to 27 March</td></tr>
<tr><td>Zone 5</td><td>Johor</td><td>5 to 9 April</td></tr>
<tr><td>Zone 6</td><td>Pahang</td><td>13 to 17 April</td></tr>
</table></td></tr>
<tr><td>3.</td><td>Meeting on conducting of the Survey with State Coordinators</td><td>• 14 Jan 2020<br>• Oral Health Programme, MOH</td><td>• All 32 state coordinators attended<br>• The scope of the meeting:<br>- Role of State Coordinator & Field Supervisor; and<br>- Data handling procedures at state level.</td></tr>
<tr><td>4.</td><td>Videographic Workshop NHMS 2020: NOHSA 2020</td><td>• 21 to 22 January 2020<br>• Oral Health Programme, MOH</td><td>• The aim was to develop promotion video in delivering message to the community regarding the survey which will be kicked off from April to August 2020.</td></tr>
</table>

| No. | Name of Activities | Date/ Venue | Description of Activities |
|---|---|---|---|
| 5. | Briefing session of NHMS 2020: NOHSA 2020 Questionnaire with Interviewers | • 30 January 2020<br>• Oral Health Programme, MOH | • Briefing session to 65 interviewers regarding interviewing techniques and questionnaire which was updated following the previous meeting at The Pearl Hotel last year |
| 6. | i. Launching of NHMS 2020: NOHSA<br><br>ii. Calibration and Standardization between State Examiners and Benchmark Examiners (Zone 1) | • 17 February 2020<br><br>• 18 to 21 February 2020<br>• Tabung Haji Hotel, Kota Kinabalu, Sabah | • Launching of NHMS 2020: NOHSA 2020 was officiated by the Principal Director of Oral Health, MoH, Dr Doreyat bin Jemun.<br><br>• This Workshop involved 12 examiners and 12 interviewers from Sabah & Sarawak and; 3 Gold Standard and 5 examiners' bench mark |
| 7. | Session on Data Handling with Core Team NHMS 2020: NOHSA 2020 | • 24 to 25 Feb 2020<br>• Oral Health Programme, MOH | • Data Handling using Microsoft Access NOHSA Database<br>• Updating NOHSA clinical data syntax |
| 8. | Calibration and Standardization between State Examiners and Benchmark Examiners (Zone 2) | • 1 to 5 Mac 2020<br>• Hotel Grand Alora and Putra Dental Clinic, Alor Setar, Kedah | • This workshop involved 10 examiners from Penang, Perlis and Kedah<br>• *Examiners' bench mark*<br>i. Dr Nor Nazaliza binti Basri<br>ii. Dr Suzana binti Sharif<br>iii. Dr Jessina binti Othman @ Osman |
| 9. | Calibration and Standardization between State Examiners and Benchmark Examiners (Zone 3) | • 8 to 12 March 2020<br>• Holiday Villa Hotel, Kota Bharu | • The Calibration and Standardization involved 8 examiners from Kelantan and Terengganu<br>• *Examiners' bench mark*<br>i. Dr Ajura binti Abd Jalil<br>ii. Dr Suzana binti Sharif<br>iii. Dr Jessina binti Othman @ Osman |
| 10. | Technical Advisory Committee Meeting NHMS 2020: NOHSA 2020 | • 24 August 2020<br>• Oral Health Programme, MOH | • Progression of the activities and issues on the postponement of the survey to year 2021 were presented. |
| 11. | Workshop on Monitoring Procedures and Intra-Examiner Agreement Calculation NHMS 2020: NOHSA 2020 | • 1 to 3 September 2020<br>• Corcorde Hotel, Shah Alam | • Attended by State Coordinators and Field Supervisors<br>• Exposure on procedures on survey monitoring at the field and hands-on exercise on calculation of intra-examiner agreement |
| 12. | Discussion Criteria of Periodontal Condition NHMS 2020: NOHSA 2020 | • 8 October 2020<br>• Oral Health Programme, MOH | • Discussion on domain and criteria used for periodontal condition with Gold Standard and benchmark examiners |

*Source: Oral Health Programme, MOH*

- **National Health and Morbidity Survey 2021: Maternal and Child Health**

The objective of the oral health module is to determine the perception and practice of mothers on oral health care of their young children. The targeted group for this oral health module is among the mothers with children aged from 0-59 months old. Instrument of oral health module questionnaire was developed and validated, including face and content validation. The Cronbach's Alpha was 0.8.

## Monitoring and Evaluation of Oral Health Research

- **Oral Health Research at State Level by MOH Oral Health Personnel**

Oral Health System Research (HSR) projects conducted at the state level was continuously monitored by the Oral Health System Research Unit. HSR state coordinators meeting was held on 14 September 2020 where all state HSR projects' achievements were presented.

In 2020, a total of 193 active projects has been conducted throughout Malaysia and Institutions, with 48 of them were completed in the same year. Despite facing with the COVID-19 pandemic, our MOH personnel is still able to disseminate the research findings from HSR projects and among those completed, 20 projects were either presented or published. However, the distribution varies between states **(Table 21).**

**Table 21:**
**Status of HSR Projects by State/Institution, 2020**

| State/Institution | *No. of Active Projects | Completed Projects | No. of Projects Presented | No. of Projects Published |
|---|---|---|---|---|
| Perlis | 7 | 2 | 0 | 0 |
| Kedah | 12 | 2 | 0 | 0 |
| P. Pinang | 20 | 6 | 2 | 0 |
| Perak | 13 | 2 | 0 | 0 |
| Selangor | 13 | 2 | 1 | 0 |
| FT KL & Putrajaya | 19 | 2 | 0 | 0 |
| Negeri Sembilan | 9 | 2 | 0 | 0 |
| Melaka | 7 | 3 | 1 | 0 |
| Johor | 5 | 0 | 0 | 0 |
| Pahang | 21 | 7 | 1 | 3 |
| Terengganu | 12 | 0 | 0 | 0 |
| Kelantan | 11 | 7 | 6 | 2 |
| Sabah | 13 | 4 | 0 | 1 |
| Sarawak | 18 | 6 | 2 | 1 |
| HKL | 8 | 2 | 0 | 0 |
| HTA | 1 | 0 | 0 | 0 |
| PPKK & ILKKM | 6 | 1 | 0 | 0 |
| **Total** | **195** | **48** | **13** | **7** |

** No. of Active Research Projects: refer to new/on-going/completed in current year*
*Target: State ≥ 5, PPKK & ILKKM, Peads HTA ≥ 1*

*Source: Oral Health Programme, MOH*

Apart from completed HSR research projects, our personnel also disseminated their case report findings or experiences through various platforms, either through presentation or published articles. **Table 22** showed the total presentations and publications done by states/institutions in 2020.

**Table 22:**
**Presentations or Publications by State/Institution, 2020**

| State/Institution | No. of Presentation | No. of Publication |
|---|---|---|
| | State & OMFS HKL ≥ 3<br>PPKK & ILKKM, Peads HTA ≥ 1 | Target = 1 |
| Perlis | 1 | 0 |
| Kedah | 0 | 3 |

| State/Institution | No. of Presentation | No. of Publication |
|---|---|---|
| | State & OMFS HKL ≥ 3<br>PPKK & ILKKM, Peads HTA ≥ 1 | Target = 1 |
| Pulau Pinang | 6 | 0 |
| Perak | 2 | 7 |
| Selangor | 1 | 1 |
| FT KL & Putrajaya | 0 | 5 |
| Negeri Sembilan | 0 | 2 |
| Melaka | 1 | 0 |
| Johor | 6 | 2 |
| Pahang | 1 | 5 |
| Kelantan | 12 | 5 |
| Terengganu | 0 | 2 |
| Sabah | 1 | 2 |
| Sarawak | 1 | 2 |
| HKL | 4 | 0 |
| HTA | 1 | 1 |
| PPKK & ILKKM | 3 | 1 |
| **Total** | **40** | **38** |

*Source: Oral Health Programme, MOH*

## Oral Health Research conducted in MOH dental facilities by non-MOH Agencies/ MOH Postgraduates

A total of 31 research proposals application from non-MOH agencies including postgraduate students were reviewed in 2020 **(Table 23):**

**Table 23:**
**Oral Health Research by MOH Postgraduates/ Non-MOH, 2020**

| No. | Title | Researcher / Agency |
|---|---|---|
| 1. | Financial Well-Being, Mental Health and Job Performance | *Agensi Kaunseling & Pengurusan Kredit (AKPK)* |
| 2. | *Kajian Penggunaan Tl Dental Injection Safety* | Dr Tay Keng Kiong<br>Syarikat TL Borneo Sdn. Bhd |
| 3. | The Influence of Communication After Placement of Orthodontic Fixed Appliances on Pain, Anxiety and Oral Health Quality of Life among Malaysian Population | Dr Yasmin binti Kamaruddin<br>Department of Paediatric Dentistry & Orthodontics,<br>Dental Faculty, Universiti Malaya |
| 4. | Market Survey for Establishment Master of Science In Dentistry (MSc.D), Kulliyyah Of Dentistry, International Islamic University Malaysia | Dr Salwana binti Supaat<br>Kulliyyah of Dentistry<br>International Islamic University Malaysia |
| 5. | Retrospective Study on Facial Fractures Related to Interpersonal Violence – Clinical Research | Dato' Dr Wan Mahadzir Wan Mustafa<br>MAHSA University |
| 6. | Molar Incisor Hypomineralisation: Awareness among Dentist Specialising in Paediatric Dentistry and Dentist with Special Interest in Paediatric Dentistry in Malaysia | Dr Tg Nurfarhana Nadirah binti Tg Hamzah<br>Kulliyyah of Dentistry<br>International Islamic University Malaysia |
| 7. | Clinicians' Perception of Conventional Greenstick Border Moulding Versus Digital Impression for Construction of Complete Denture | Dr Hazira binti M Yusof<br>Faculty of Dentistry<br>*Universiti Sains Islam Malaysia* |

| No. | Title | Researcher / Agency |
|---|---|---|
| 8. | Assessing Oral Health Literacy of Antenatal mothers in Petaling District | Dr Zanjebil Abdulkadir Alsagoff<br>Postgraduate Student<br>Medical Faculty, Universiti Malaya |
| 9. | Work-Related Quality of Life among Newly Qualified Malaysian Dentists | Dr Aiman Nadiah binti Ahmad Tajudin<br>Postgraduate Student<br>Dental Faculty, Universiti Malaya |
| 10. | Awareness, Knowledge, Attitude and Usage of E-Cigarettes among Primary Schoolchildren in Port Dickson | Dr Nur Diana binti Ab Latif<br>Postgraduate Student<br>Dental Faculty, Universiti Malaya |
| 11. | Oral Health Behaviours of Children with Cerebral Palsy, Their Barriers in Home Oral Care and Access to Dental Services: A Mix Methods Study | Dr Susan Shalani A/P Gnanapragasam<br>Postgraduate Student<br>Dental Faculty, Universiti Malaya |
| 12. | Prevalence of Sick Building Syndrome and Its Association with Perceived Indoor Environmental Quality in Public Dental Clinics | Dr Mary Melissa A/P Sarimuthu,<br>Postgraduate Student<br>Dental Faculty, Universiti Malaya |
| 13. | Oral Health education (OHE-App) | Dr Nazirah binti Ab Mumin<br>Postgraduate Student<br>Dental Faculty, Universiti Malaya |
| 14. | Perceived Confidence in Performing Peripheral Venepuncture Among Dental Practitioners in New Zealand and Malaysia | Dr Mohd Hakimin bin Mohamed Ashri<br>Postgraduate Student<br>University of Otago, New Zealand |
| 15. | Factors and Barriers of Utilising Public Oral Health Care Services among Antenatal Mothers in Selangor | Dr Nursharhani binti Shariff<br>Postgraduate Student<br>Dental Faculty, UiTM |
| 16. | Evaluation of Electronic Medical Record (EMR) in Primary Care Setting: Prediction of User Acceptance and Performance | Dr Tuan Yuswana binti Tuan Soh<br>Postgraduate<br>Dental Faculty, UiTM |
| 17. | Perception of E-Cigarette and Vape Usage among Parents, Teachers and Secondary School Children in Kuala Lumpur | Dr Intan Elliayana binti Mohamed<br>Postgraduate<br>Dental Faculty, UiTM |
| 18. | Sugar Sweetened-Beverage Tax in Malaysia: A Content Analysis of Commentary Posted on Facebook and Malaysian Online News | Dr Muhammad Faiz bin Mohd Hanim<br>Postgraduate<br>Dental Faculty, UiTM |
| 19. | Determinants of Oral Health Practice Among Adolescents in School Incremental Programs | Dr Maiyazurah binti Abdul Aziz<br>Postgraduate<br>Dental Faculty, UiTM |
| 20. | A Study of Knowledge, Attitude and Perception on E-Cigarettes among Oral Health Personnel in Perlis | Dr Khairul Fikri bin Sebri<br>Postgraduate<br>Dental Faculty, UiTM |
| 21. | A Legal Framework for Compulsory Dental Record in Forensic Dental Identification | Dr Sabarina binti Omar<br>Postgraduate<br>Dental Faculty, UiTM |
| 22. | Volumetric Assessment of Canines using Postmortem Computed Tomography (PMCT) for Sex Estimation in Malaysia Population | Dr Mohd Hafizal bin Harudin<br>Postgraduate<br>University Of Dundee, Scotland, UK |
| 23. | The Assessment of Quality of Life and Supportive Care Needs of Caregivers for Oral Cancer Patients in Malaysia | Dr Aira Syazleen binti Ahmad<br>Postgraduate<br>Dental Faculty, Universiti Malaya |
| 24. | Breaking Bad News of Oral Cancer Diagnosis in Malaysia: Clinicians' and Patients Perspectives | Dr Siti Nur Farhanah binti Mohd Desa<br>Postgraduate<br>Dental Faculty, Universiti Malaya |
| 25. | Economic Evaluation of Adjunctive Use of Antimicrobial Peptides (AMPs) in the Management of Periodontitis: A Decision Analytic Model | Dr Ainol Haniza binti Kherul Anuwar<br>Postgraduate<br>Dental Faculty, Universiti Malaya |

| No. | Title | Researcher / Agency |
|---|---|---|
| 26. | Periodontal Stability and Progression of Periodontitis in Patients under Supportive Periodontal Therapy | Dr Ting Teck Pei<br>Postgraduate<br>Dental Faculty, Universiti Malaya |
| 27. | Evidence-based Guidelines on Motivational Interviewing for the Prevention of Children's Caries in Malaysia | Dr Mohd Syukri bin Mohd Taib<br>Postgraduate<br>Dental Faculty, Universiti Malaya |
| 28. | Development and Evaluation of An Interactive Board Game for Primary Schoolchildren | Dr Nor Fatimah Syahraz binti Abdul Razakek<br>Postgraduate<br>Dental Faculty, Universiti Malaya |
| 29. | Comparison of Periodontal Parameters, Salivary pH and Cotinine Levels among Cigarette-Smokers, E-Cigarette Smokers and Non-Smokers in a Selected Population of Malaysia: A Cross-Sectional Study | Dr Nurul Wahida binti Mohd Hasan<br>Postgraduate<br>Dental Faculty, UKM |
| 30. | Ankyloglossia Grading in relation to Sleep Disordered Breathing Amongst Individuals with Malocclusion | Dr Sam Jia Xian<br>Postgraduate<br>Dental Faculty, UKM |
| 31 | The Effectiveness of Mobile Application Prototype (*Gigiku Sihat*) in Improving Dietary Habit and Oral Hygiene of Children Aged 4 to 6 Years Old and the Nutrition and Oral Health Knowledge, Attitude and Practice of the Parents in Kelantan: A Cluster Randomised Trial | Dr Noor Akmal binti Muhamat<br>Postgraduate<br>School of Dental Sciences, USM |

*Source: Oral Health Programme, MOH*

## Publication of Abstracts from Research Projects and Publications by Oral Health Personnel, Ministry of Health Malaysia

Dissemination of research output has been acknowledged as one of the important components of research process. The abstracts of completed research projects and publication by MOH oral health personnel were compiled in Compendium of Abstracts report which is published every two years. A total of 176 abstracts from nine (9) dental specialties were published in the Compendium of Abstracts 2018-2019.

## ORAL HEALTH PROFESSIONAL DEVELOPMENT

### Recognition and Endorsement of Dental Postgraduate Qualifications

New postgraduate qualifications in the field of dentistry that were fully accredited by the Malaysian Qualifications Agency in 2020 and for recognition are as follows:

i. Doctor in Clinical Dentistry (Periodontology), Universiti Teknologi MARA (UiTM) - 13.07.2020 [MQA certificate number: 21309]
ii. Doctor in Clinical Dentistry (Prosthodontics), Universiti Teknologi MARA (UiTM) - 13.07.2020 [MQA Certificate Number: 21310]
iii. Master of Science in Dentistry, Universiti Teknologi MARA (UiTM) - 22.7.2020 [MQA Certificate Number: 21175] *

* *Graduates with this qualification alone cannot be gazetted as dental specialist.*

### Gazettement of Dental Specialists

The Dental Specialist Gazettement and Evaluation Committee [*Jawatankuasa Penilaian Pewartaan Pakar Pergigian (JPPPP)]* had four (4) meetings in 2020 to assess and make recommendations to the *Jawatankuasa Khas Perubatan (JKP)* for gazettement of Dental Specialists in the MOH.

- **Gazettement of Dental Public Health Specialists**

Four (4) Dental Public Health Specialists were gazetted in 2020 **(Table 24).**

**Table 24:**
**Dental Public Health Specialists Gazetted, 2020**

| No. | Name | Eligible Date for Specialist Appointment |
|---|---|---|
| 1. | Dr Rathmawati binti Ahmad | 03.03.2020 |
| 2. | Dr Wong Siong Ting | 03.03.2020 |
| 3. | Dr Siti Kamilah binti Mohamad Kasim | 03.03.2020 |
| 4. | Dr Nurul Izzah binti Ali | 04.09.2020 |

*Source: Oral Health Programme, MOH*

- **Gazettement of Clinical Dental Specialists**

A total of 33 Clinical Dental Specialists from various specialty were gazetted in 2020 **(Table 25).**

**Table 25:**
**Clinical Dental Specialists Gazetted, 2020**

| No. | Name | Specialty | Eligible Date for Specialist Appointment |
|---|---|---|---|
| 1 | Dr Siti Khadijah binti MoHd Zaki | Restorative Dentistry | 02.11.2019 |
| 2 | Dr Mohd Asmawardi bin Abdullah | Oral and Maxillofacial Surgery | 30.11.2019 |
| 3 | Dr Normah binti Yacob | Periodontic | 30.11.2019 |
| 4 | Dr Farhana binti Omar | Restorative Dentistry | 30.11.2019 |
| 5 | Dr Noraliza binti Mohd Nor | Forensic Odontology | 20.12.2019 |
| 6 | Dr Karen Voon Kai Rou | Orthodontic | 29.12.2019 |
| 7 | Dr Anis Ezrina binti Abdul Rahman | Restorative Dentistry | 22.02.2020 |

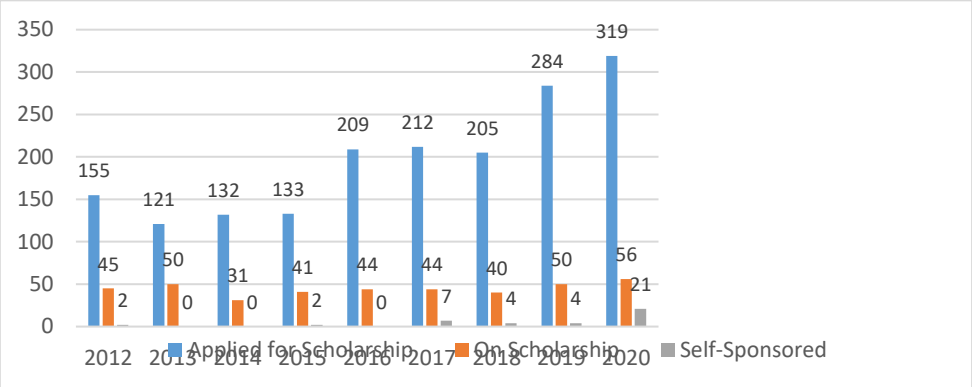
| No. | Name | Specialty | Eligible Date for Specialist Appointment |
|---|---|---|---|
| 8 | Dr Mohd Khairul Anwar bin Mohd Tahir | Oral and Maxillofacial Surgery | 29.02.2020 |
| 9 | Dr Noor Azwani binti Mat Nawi | Oral and Maxillofacial Surgery | 29.02.2020 |
| 10 | Dr Muzaffar bin Apipi | Oral and Maxillofacial Surgery | 29.02.2020 |
| 11 | Dr Umar bin Kamali | Oral and Maxillofacial Surgery | 29.02.2020 |
| 12 | Dr Sujesh a/l Sreedharan | Oral and Maxillofacial Surgery | 29.02.2020 |
| 13 | Dr Lim Woei Tatt | Oral and Maxillofacial Surgery | 29.02.2020 |
| 14 | Dr Suharni binti Puteh | Paediatric Dentistry | 03.03.2020 |
| 15 | Dr Habibah binti Md Said | Paediatric Dentistry | 03.03.2020 |
| 16 | Dr Mohd Shukri bin Hazni | Orthodontic | 10.03.2020 |
| 17 | Dr Low Mabel | Orthodontic | 10.03.2020 |
| 18 | Dr Teh Ng Heng Khiang | Orthodontic | 10.03.2020 |
| 19 | Dr Azaneee Nur binti Mohd Arif Fadzillah | Orthodontic | 10.03.2020 |
| 20 | Dr Hajar Hidayah binti Rossdan | Orthodontic | 27.03.2020 |
| 21 | Dr Goh Su Phing | Orthodontic | 01.04.2020 |
| 22 | Dr Pua Shih Chia | Orthodontic | 01.04.2020 |
| 23 | Dr Tie Sing Fong | Periodontic | 01.04.2020 |
| 24 | Dr Wong Suet Yen | Oral and Maxillofacial Surgery | 15.05.2020 |
| 25 | Dr Ruqoyyah Muslimat binti Othman | Orthodontic | 25.05.2020 |
| 26 | Dr Lim Ei Leen | Periodontic | 27.05.2020 |
| 27 | Dr Ramizah binti Rozaimee | Oral and Maxillofacial Surgery | 03.06.2020 |
| 28 | Dr Farah Wahida binti Hassan | Periodontic | 16.06.2020 |
| 29 | Dr Shina binti MoHd Ariffin | Paediatric Dentistry | 26.06.2020 |
| 30 | Dr Thaarani a/p Vijayakumar | Paediatric Dentistry | 01.07.2020 |
| 31 | Dr Mazlie bin Sa'idin | Periodontic | 02.07.2020 |
| 32 | Dr Thai Poh Kum | Orthodontic | 14.07.2020 |
| 33 | Dr Manmeet Kaur a/p Rabindarjeet Singh | Periodontic | 23.09.2020 |

*Source: Oral Health Programme, MOH*

## Postgraduate Training for Dental Professionals

Out of 319 dental officers who applied and passed the interview screening, 56 officers (18 percent) were offered federal training scholarship (*Hadiah Latihan Persekutuan* - HLP) for postgraduate courses/area of special interest in 2020 while 21 officers were offered full paid study leave (*Cuti Belajar Bergaji Penuh* - CBBP) without HLP (**Figure 1**). For the first time, the HLP offerrings has been coordinated with the offer of training places at local public universities offering dental speciality programmes in 2020. This initiative has addressed the problem that occurs every year when officers offered with HLP did not get training places while officers who received offer from local universities were not selected as HLP recipients. This initiative also created more opportunities for officers who were offered training places to apply for CBBP without HLP.

**Figure 1:**
**Dental Officers Pursuing Postgraduate Training, 2012 to 2020**




*Source: Oral Health Programme, MOH*

Out of 77 officers who received approval of CBBP with/without HLP in 2020, 72 officers went for postgraduate/ area of special interest training at local public universities, while five (5) officers went to universities abroad (**Table 26**).

**Table 26:**
**Dental Officers Pursuing Postgraduate Training by Discipline, 2020**

| Discipline | On Federal Scholarship | | Self-sponsored/ other sponsorship | | Total |
|---|---|---|---|---|---|
| | Local | Abroad | Local | Abroad | |
| 1. Oral and Maxillofacial Surgery | 14 | 0 | 3 | 0 | 17 |
| 2. Orthodontic | 5 | 0 | 4 | 1 | 10 |
| 3. Periodontic | 8 | 0 | 0 | 0 | 8 |
| 4. Paediatric Dentistry | 8 | 0 | 3 | 0 | 11 |
| 5. Restorative Dentistry | 7 | 0 | 5 | 1 | 13 |
| 6. Oral Pathology and Oral Medicine | 0 | 0 | 0 | 0 | 0 |
| 7. Special Care Dentistry | 1 | 0 | 0 | 0 | 1 |
| 8. Dental Public Health | 12 | 0 | 0 | 0 | 12 |
| 9. Forensic Odontology | 0 | 0 | 0 | 0 | 0 |
| 10. Area of Special Interest | 1 | 0 | 0 | 3 | 4 |
| 11. Enforcement Law | 0 | 0 | 1 | 0 | 1 |
| **TOTAL** | **56** | **0** | **16** | **5** | **77** |

*Source: Oral Health Programme, MOH*

A total of 39 dental officers completed postgraduate training in 2020 and commenced the induction training/pre-gazettement period **(Table 27).**

**Table 27:**
**Dental Officers who Completed Postgraduate Training by Speciality, 2020**

| Speciality | Local Universities | Institutions Abroad |
|---|---|---|
| **1. Oral and Maxillofacial Surgery** | 7 | 0 |
| **2. Orthodontic** | 2 | 2 |
| **3. Periodontic** | 8 | 0 |

| Speciality | Local Universities | Institutions Abroad |
|---|---|---|
| **4. Paediatric Dentistry** | 5 | 0 |
| **5. Restorative Dentistry** | 6 | 0 |
| **6. Oral Pathology and Oral Medicine** | 2 | 0 |
| **7. Special Care Dentistry** | 0 | 1 |
| **8. Dental Public Health** | 5 | 0 |
| **9. Forensic Odontology** | 0 | 1 |
| **TOTAL** | **35** | **4** |

*Source: Oral Health Programme, MOH*

## New Dental Officer Programme

New Dental Officer Programme (NDOP) has started in 2017 and was specially designed to provide adequate and structured training for the new dental officers (NDOs) within a one (1) year period since appointment. In 2020, a total of 864 newly contractually appointed dental officers underwent the NDOP.

## Professional Development of Dental Auxiliaries

- **Certificate of Dental Surgery Assistant, Diploma in Dental Nursing and Diploma in Dental Technology**

In January 2020, a total of 83 trainees were selected to undergo the Certificate of Dental Surgery Assistance course at *Institut Latihan Kementerian Kesihatan Malaysia (Pergigian*) Georgetown [ILKKM Georgetown (*Pergigian*)]. However, the scheduled on-site practical training at their respective practical centres was postponed from July 2020 to January 2021 due to the compromised safety of the trainees during the COVID-19 pandemic. As for the Diploma in Dental Nursing and Diploma in Dental Technology, there was no intake in 2020, and these courses are expected to resume intake in July 2021.

- **The Rebranding of Diploma in Dental Nursing to Diploma in Dental Therapy**

In October 2020, the MOH Training Management Division (*Bahagian Pengurusan Latihan KKM*) has informed the approval of the rebranding of Diploma in Dental Nursing to Diploma in Dental Therapy. The new curriculum will be implemented starting July 2021.

- **The Upgrade of Certificate of Dental Surgery Assistance to Diploma of Oral Healthcare**

The Programme has always braced the importance of career advancement among its workforce. For the betterment and career enhancement of the Dental Surgery Assistant (DSA), in 2012, the programme had applied to upgrade the Certificate of Dental Surgery Assistance to diploma level, with the insight to improve the number of trainee intakes in this in-training course and henceforth the number of DSA output in the future. The Training Management Division of MoH in December 2020 had finally notified the Diploma in Oral Healthcare curriculum has been prepared. The curriculum is currently in-waiting for approval by *Lembaga Pendidikan KKM* and the application for accreditation from MQA will follow subsequently. The course is expected to be ready to be offered by 2022.

- **Post-basic Training**

A post-basic training in Orthodontic for Dental Technologist was conducted from 2 September 2019 until 29 February 2020 with a total intake of 25 Dental Technologists. All 25 candidates

have passed the course. Due to the COVID-19 pandemic, the post-basic training in Oral and Maxillofacial Surgery for Dental Technologist which was set to kick-start in September 2020 was postponed to September 2021.

**Image 1 & 2:**
**Post-basic Training of Dental Technologists at ILKKM Georgetown (*Pergigian*)**

*Source: PPKK & ILKKM Georgetown (Pergigian)*

## In-Service Training for Dental Personnel (*Latihan Dalam Perkhidmatan*)

- **Local In-Service Training**

As of end December 2020, there were 21 consultancy trainings, courses and conferences conducted and attended by Dental Specialists, Dental Officers, Dental Auxilliaries and Supporting Staff (**Table 28**).

**Table 28:**
**Consultancy Trainings and Courses Conducted and Attended in 2020**

| No | Training Topic | Participants | Date | Expenses (RM) | Venue |
|---|---|---|---|---|---|
| 1 | 27th MDA Scientific Convention and Trade Exhibition (SCATE) | 31 Officers | 14-16 February 2020 | 21,700.00 | *Kuala Lumpur Convention Centre* (KLCC) |
| 2 | Standardisation and Implementation of New Classification of Periodontal and Peri-Implant Diseases in MOH | 52 Officers | 24-25 February 2020 | 11,800.00 | Klana Resort Hotel Seremban |
| 3 | *Kursus Peningkatan Profesionalisme dan Pengurusan Pentadbiran / Kewangan bagi* | 1 Officer and 44 auxiliaries | 21-23 February 2020 | 13,980.00 | Copthorne Hotel Pulau Pinang |

| No | Training Topic | Participants | Date | Expenses (RM) | Venue |
|---|---|---|---|---|---|
| | *Anggota Kumpulan Pelaksana PKP KKM* | | | | |
| 4 | *Bengkel Penggunaan Kad Rawatan LP8 Baharu & Penggabungan Reten* (Gi-Ret) | 64 Officers | 25-27 February 2020 | 19,840.00 | Summit Hotel, USJ Subang |
| 5 | MADPHS Scientific Conference and Annual General Meeting | 67 Officers | 7 March 2020 | 12,060.00 | Concorde Hotel Shah Alam |
| 6 | *Bengkel* TOT Clinical Prevention for Caries (CPPC) 2020 | 29 Officers and 11 auxiliaries | 10 March 2020 | 800.00 | Oral Health Programme, MOH |
| 7 | *Bengkel Pemetaan dan Pengurusan Perjawatan di bawah Program Kesihatan Pergigian Tahun 2020* | 25 Officers and 16 auxiliaries | 10-12 March 2020 | 16,220.00 | The Guest Hotel & Spa Port Dickson |
| 8 | *Kursus* Coaching & Monitoring *Juruterapi Pergigian dan Juruteknologi Pergigian Peringkat Kebangsaan* 2020 | 3 Officers and 58 auxiliaries | 9-11 March 2020 | 19,860.00 | Felda Residence Kuala Terengganu |
| 9 | *Bengkel Pembangunan Gi-Ret (Fasa 2)* | 8 Officers and 4 auxiliaries | 20 July 2020 | 9,979.80 | Best Western Hotel Shah Alam |
| 10 | *Seminar Tahunan Slaid Patologi Mulut Tahun 2020* | 6 Officers | 28 July 2020 | 1,007.00 | Institute for Medical Research (IMR) |
| 11 | *Bengkel Penyeragaman Dokumentasi dan Kemaskini* Health Information Framework e-Reporting v2.0 Oral Health | 32 Officers and 1 auxiliary | 10-12 August 2020 | 13,400.00 | Holiday Villa Hotel and Conference Centre, Subang |
| 12 | *Kursus Bedah Mulut dan Maksilofasial Zon Timur (Pahang, Terengganu dan Kelantan)* | 24 Officers | 12-13 August 2020 | 2,000.00 | Seri Malaysia Hotel, Kuala Terengganu |
| 13 | *Bengkel* Therapeutic Communication for Dental Practitioners | 25 Officers | 17-19 August 2020 | 11,500.00 | Ancasa Hotel, Kuala Lumpur |
| 14 | Geriatrics Patients: Preparation of Dental Professionals to Face Challenges | 100 Officers | 10 August 2020 | 7,250.40 | Webinar |
| 15 | Management of Cancer Patients in Oral and Maxillofacial Surgery *(Kursus OMFS Zon Selatan)* | 35 Officers | 20-21 September 2020 | 2,000.00 | *Amoris Grand Event Space* |
| 16 | 4th National Pain Free Conference & 7th MASP Biennial Scientific Meeting 2020 | 2 Officers | 23-24 September 2020 | 100.00 | Online |
| 17 | 6th Malaysian Dental Technologist Conference and Trade Exhibition 2020 | 50 Auxilliaries | 23-27 September 2020 | 20,000.00 | Berjaya Times Square |
| 18 | *Kursus* Systematic Review in the Development and Implementation of Dental CPG *bagi Pakar dan Pegawai Pergigian* | 28 Officers | 23-25 September 2020 | 13,480.00 | Concorde Hotel Shah Alam |
| 19 | *Kursus Pengenalan Asas Fotografik Forensik 2020* | 26 Officers and 8 auxiliaries | 12-13 October 2020 | 4,170.00 | Oral Health Programme, MOH |

| No | Training Topic | Participants | Date | Expenses (RM) | Venue |
|---|---|---|---|---|---|
| 20 | *Kursus Pakar Pergigian dalam Tempoh Pra-Pewartaan 2020* | 26 Officers | 12-13 October 2020 | 150.00 | Online |
| 21 | *Kursus Pengenalan Asas Risikan dan Intipan* | 48 Officers and 1 auxiliary | 18-20 November 2020 | 17,485.55 | Ancasa Royale Hotel, Pekan Pahang |

*Source: Oral Health Programme, MOH*

## Advanced Competency Programme (ACP)

In 2020, the offer to undergo training under Advanced Competency Programme (ACP) was cancelled due to COVID-19 pandemic that hit the whole world.

## Continuing Professional Development (CPD)

The following CPD sessions were held in the Oral Health Programme in 2020 **(Table 29).**

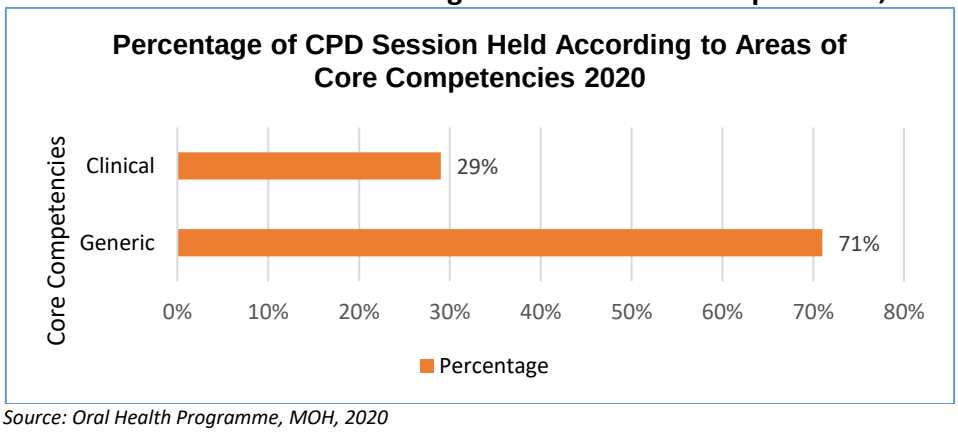
**Table 29:**
**List of CPD conducted in the Oral Health Programme, 2020**

| No | CPD Courses | Date |
|---|---|---|
| 1 | *Taklimat Keselamatan dan Pencegahan Kebakaran untuk Kepentingan Pekerja* | 21 February 2020 |
| 2 | MDC: Debunking the Myth | 8 July 2020 |
| 3 | Overview of Cognitive Behavioural Therapy (CBT) | 7 August 2020 |
| 4 | SOP *Penguatkuasaan - Risikan, Intipan dan Serbuan* | 21 August 2020 |
| 5 | *Sistem Pembersih Udara Mudah Alih dan* Ceiling Mounted Sanuvox | 3 September 2020 |
| 6 | SOP *Penguatkuasaan - Pendakwaan dan Pelupusan Barang Sitaan* | 11 September 2020 |
| 7 | Plasmapp Sterlink Fast Low-temperature Sterilisation | 25 September 2020 |

*Source: Oral Health Programme, MOH*

These CPD sessions comprised of two (2) areas of the core competencies namely Clinical (29 percent) and Generic (71 percent) **(Figure 2)**.

**Figure 2:**
**Number of CPD Sessions According to Areas of Core Competencies, 2020**




*Source: Oral Health Programme, MOH, 2020*

## National Oral Health Policy (NOHPol)

The Oral Health Programme has taken the initiative to develop the National Oral Health Policy. The initiative is seen timely as at the current time there is no national oral health policy which act to consolidate national agenda in improving the Malaysian oral health status. In

order to deliver the best oral healthcare service, the National Oral Health Policy will be the referral document for programme planning, implementation strategies, evaluation and monitoring. In summary, the objectives of the National Oral Health Policy are:

i. To provide a basis in developing strategies and provide direction for planning, implementation, evaluation and monitoring of oral health programme towards improving the oral health of the entire population.
ii. To improve oral healthcare delivery services for identified priority group at risk of developing oral health problems.
iii. To improve oral healthcare delivery approach in a holistic manner involving relevant stakeholders and agencies.

The development of National Oral Health Policy document was initiated in the middle of 2020 with the appointment of both the Executive Committee and Technical Working Committee, which consist of representatives from both public and private sectors. Unfortunately, the development of the document was hampered due to the pandemic COVID-19 but discussion and presentation was still carried out by the means of online platform. In the latest development, an introduction to National Oral Health Policy has been presented to the *Jawatankuasa Dasar dan Perancangan Kementerian Kesihatan* (JDPKK) by Director of Oral Health Policy and Strategic Management Division on 28 April 2021 and this document will be presented next in *Mesyuarat Khas Ketua Pengarah Kesihatan*.

### National Oral Health Plan 2021 - 2030 (NOHP)

National Oral Health Plan is a reference document which set the goals and strategies to address the key areas of concern aiming to improve the oral health of Malaysians. The NOHP 2021 - 2030 is formulated encompassing these focus areas: improvement of the major oral health disease burdens, tackling the common risk factors in health, increase access and equitability, ensuring quality and safe oral healthcare delivery, establishing electronic medical record (EMR) and to include the identified priority groups, marginalised and vulnerable population. Another major initiative planned is to collaborate with stakeholders of both public and private sectors in promoting oral healthcare, oral disease prevention, treatment and rehabilitation through a high-quality system that is equitable, affordable, efficient, technologically appropriate, environmentally adaptable, customer centered and innovative.

By the end of 2019, the Technical Task Force for the development of the National Oral Health Plan (NOHP) 2021 - 2030 were established and the ground work for the plan has also started. In the early 2020, the Executive Committee members were appointed and several meetings were held to finalised the focus areas, goals and indicators. Unfortunately, the document preparation was held back in 2020 due to the pandemic COVID-19. Nevertheless, meetings and discussions were undertaken using the means of online platforms. Twelve focus areas have been chosen and agreed upon for NOHP 2021 - 2030. The focus areas are:

i. Periodontal
ii. Caries
iii. Oral Cancer
iv. Smoking
v. Fluoride
vi. Marginalised Group

vii. Oral Health Literacy
viii. Sports Dentistry
ix. Safety and Quality
x. Utilisation
xi. Big Data
xii. Sugar

The framework of the NOHP 2021-2030 is in line with the National Oral Health Policy guiding principles, priority areas and major strategies which is developed simultaneously with this document.

## ORAL HEALTH INFORMATION MANAGEMENT

### National Electronic Medical Record (EMR) Implementation Project

Electronic Medical Record (EMR) is an electronic health record to replace manual (paper) medical records in managing patient which contains an individual's health and medical information generated, collected, managed and referenced by medical practitioners within an organization. Under the 2020 RMK-11 budget, MOH obtained an approval for the implementation of EMR System Expansion Pilot Project at nine (9) district hospitals in several identified states. Following a change in facilities' location and the state of the said project, which involved seven (7) hospitals, 42 health clinics and 11 dental clinics in Negeri Sembilan, the project has been renamed as National Electronic Medical Records (EMR) Implementation Project, Phase One.

The implementation of EMR Phase One Project in hospitals and clinics in Negeri Sembilan is a backbone model for the delivery of Person Care and Health Population services through an integrated and coordinated care information sharing platform to achieve a Lifetime Health Record to improve the well -being of the people. The EMR project encompassed the following components:

- Hospital Patient Information System (core applications: HIS@KKM)
- Clinical Patient Information System (core applications: TPC-OHCIS)
- Health Information Exchange (HIE) platform
- Virtual Clinic system which includes the Online Appointment System, Online Registration and ePayment Gateway components.

Group site visits to 11 MOH dental clinics in Negeri Sembilan was scheduled in 2020 to achieve the following objectives:

- To identify hardware, software, ICT equipment, internet port, power point and other requirements for the implementation of TPC-OHCIS system
- To document the ICT hardware and equipment that available at the site
- To identify the infrastructure facilities that are deemed necessary and appropriate to be added for the implementation of the TPC-OHCIS system.
- To identify a placement of appropriate ICT hardware and equipment based on security aspects and adherence to ICT hardware ethics

**Image 3 & 4**
**Group Site Visit to Dental Clinics in Negeri Sembilan**

In preparation for project documentation by respective project owners of EMR project scope, series of workshop led by e-Health Section, Planning Division MoH was held.

**Image 5 & 6**
**Series of EMR Workshop and Discussion**


## Tele-Primary Care-Oral Health Clinical Information System (TPC-OHCIS)

Over the period of two-years from 2017 to 2018, the TPC-OHCIS system successfully "went live" at 10 dental clinics and six (6) health clinics in Seremban District, Negeri Sembilan for better managing patient's data electronically. The TPC-OHCIS deployment was further expanded to 21 dental clinics in other six (6) districts in Negeri Sembilan between October and November 2020 **(Image 7 & 8).**

**Image 7 & 8**
**User Acceptance Test (UAT) in Negeri Sembilan Dental Clinics**


The TPC-OHCIS deployment obviously would change how the dental personnel work. Recognizing this, several series of hands-on training related to TPC-OHCIS user's role and function that would help the personnel to work efficiently and effectively, were conducted at Computer Lab, Negeri Sembilan Health State Department in September and October 2020 **(Image 9 & 10).**

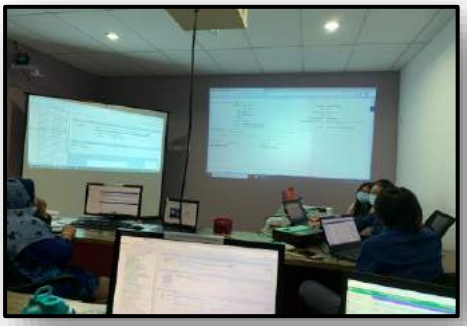
**Image 9 & 10**
**TPC-OHCIS Training Session at Negeri Sembilan Health State Department, Computer Lab**


## Clinical Documentation (CD) in Sistem Pengurusan Pesakit (SPP) and Operating Theatre Management System (OTMS) Project for HIS@KKM Phase 1

The Oral Health Programme is involved in the strengthening of HIS@KKM Phase 1 project which includes the development of the Clinical Documentation (CD) Module and the Operating Theatre Management System (OTMS), led by the Medical Development Division, MoH. The CD module in the *Sistem Pengurusan Pesakit* (SPP) was piloted at Hospital Raja Permaisuri Bainun (HRPB), Ipoh in 2020, while the OTMS project shall be piloted at Hospital Tuanku Jaafar, Seremban in 2021.

**Image 11**
**CD Project: UAT Session For HIS@KKM EMR Plus (Second Round) – *Oral Health,* 20 to 21 February 2020**

**Image 12**
**HIS@KKM Phase 1 Project: Dry Run User Acceptance Test (UAT) Session for OTMS Application, 22 to 23 July 2020**



## Oral Health Clinical Information System (OHCIS)

The OHCIS project which was initiated in January 2008 under Ninth Malaysia Plan (RMK9) for implementation at 13 dental clinics in Johor, Selangor and FT Kuala Lumpur & Putrajaya is currently under operational and maintenance support services by Persada Digital Sdn. Berhad for 2 years (24 months) from 15 July 2019 to 14 July 2021. The Project Working Team meeting was convened in June 2020 to discuss on the project deliverables by the vendor such as monthly report, Helpdesk and preventive maintenance work **(Image 13 & 14).**

**Image 13 & 14**
**Project Team Meeting For OHCIS, 23 June 2020**

## Tele-dentistry

Realizing the COVID-19 pandemic would likely far from over, the implementation of tele-dentistry initiatives namely the On Line Appointment System (OAS) and Virtual Dental Clinic which aimed to improve dental practice and patient care such as reducing congestion at the MOH dental clinics during the pandemic are appropriate. As such, several discussions which involved various divisions in MOH namely Family Health Development Division, Information Management Division, Legal Office and the Malaysian Dental Council (MDC) and MAMPU were held virtually.

**Image 15**
**Virtual Clinic Meeting**
**9 July 2020**

**Image 16**
**Meeting on SRS for Online Appointment**
**May 2020**

## MyHDW e-reporting (Oral Health)

The Oral Heath (Source System and Reporting System) was developed under the Malaysian Health Data Warehouse (MyHDW) Phase 2 in 2017 to document the oral health service delivery data known as e-Reporting V2.0 Oral Health. Pre-workshop and Worksop were conducted in July and August 2021 to standardize the Malaysian Health Informatics Framework (MyHIF) documentation and mapping the dental processes to procedures to meet the Fixed Format Report (FFR) and Adhoc Query requirements.

**Image 17**
**Pre- Workshop on Strengthening and Updating Health Information Framework E-Reporting V2.0 Oral Health, 21 July 2020**

**Image 18**
**Workshop on Strengthening and Updating Health Information Framework E-Reporting V2.0 Oral Health, 10 until 12 August 2020**

## ORAL HEALTH TECHNOLOGY

### Dental Clinical Practice Guidelines (CPG)

There are 13 Clinical Practice Guidelines (CPG) published by the Oral Health Programme. As of 31 December 2020, five (5) CPGs are current (published less than 5 years), five (5) CPGs were being reviewed and another three (3) CPGs were due for review, as listed in **Table 30.**

**Table 30:**
**Clinical Practice Guidelines (CPG) Status as of 31 December 2020**

| Title of CPG | Publication (Year) | Status |
|---|---|---|
| Management of Avulsed Permanent Anterior Teeth (3rd Edition) | 2019 | Current |
| Management of Mandibular Condyle Fractures (2nd Edition) | 2019 | Current |
| Management of the Palatally Ectopic Canine (2nd Edition) | 2016 | Current |
| Management of Acute Orofacial Infection of Odontogenic Region in Children | 2016 | Current |
| Management of Periodontal Abscess (2nd Edition) | 2016 | Current |
| Management of Unerupted and Impacted Third Molar | 2005 | Review in progress |
| Management of Anterior Crossbite in the Mixed Dentition (2nd edition) | 2013 | Review in progress |
| Management of Severe Early Childhood Caries (2nd edition) | 2012 | Review in progress |
| Orthodontic Management of Developmentally Missing Incisors | 2012 | Review in progress |
| Management of Chronic Periodontitis (2nd edition) | 2012 | Review in progress |
| Management of Unerupted Maxillary Incisor (2nd edition) | 2015 | Due for review |
| Antibiotic Prophylaxis in Oral Surgery for Prevention of Surgical Site Infection (2nd Edition) | 2015 | Due for review |
| Management of Ameloblastoma | 2015 | Due for review |

*Source: Oral Health Programme, MOH*

### Systematic Review in the Development of Dental CPG 2020 Course

Systematic Review in the Development of Dental CPG 2020 course was organised on 23 to 25 September 2020 at Concorde Hotel Shah Alam to provide exposure on development process of a quality and standard CPG, as well as training on the methods of scientific evidence search and appraisal. A total of 22 participants consists of development group members from various dental specialties attended this course.

### Approved Purchase Price List (APPL)

This section supports the role of the Procurement and Privatisation Division, MOH by providing input with regards to APPL. This includes price negotiations, finalise the product list and suppliers, as well as monitor issues related to tendering companies, such as penalty on late delivery and product complaints. There were eight (8) dental products enlisted in APPL 2020-2021, namely Dental Amalgam 1 spill, Dental Amalgam 2 spill, Dental POP, Hypodermic Needle (Long), Hypodermic Needle (Short), Mepivacaine dan Cotton Roll.

In year 2020, three (3) products were re-tendered, which is Dental Amalgam 1 spill, Dental Amalgam 2 spill and Dental Stone. Technical Specification Meeting of the products was conducted on 20 January 2020, whereas Technical Evaluation Meeting was held on 20 July 2020.

### Oral Health Technology Assessment

Technology Assessments were done on three (3) dental devices/materials as follows:

- Extra-Oral Vacuum Aspirator / Suction
- KENKOKUN (Oral Cavity Function Testing Device)
- Tooth Whitening / Bleaching Agents

Technology Review Reports were produced based on scientific evidence and literature search. These reports have been uploaded in the Oral Health Programme official website https://ohd.MoH.gov.my.

### Minamata Convention on Mercury

Minamata Convention on Mercury is an international treaty outlined to ensure protection of human health and the environment from the harmful effect of mercury compunds. In dentistry, mercury is used as a component in a restoration material called dental amalgam. Measures were taken to reduce dental amalgam usage and gradually shift to alternative dental restorations.

The national goal set by Oral Health Programme (OHD) for use of dental amalgam by year 2020 is 15 percent. In 2019, dental amalgam usage within Ministry of Health facilities was successfully reduced to less than 10 percent. Collaboration with other stakeholders including Ministry of Defence, Ministry of Higher Education and Private Practitioners is required to chart the future direction of amalgam usage in Malaysia.

# ACTIVITIES AND ACHIEVEMENTS

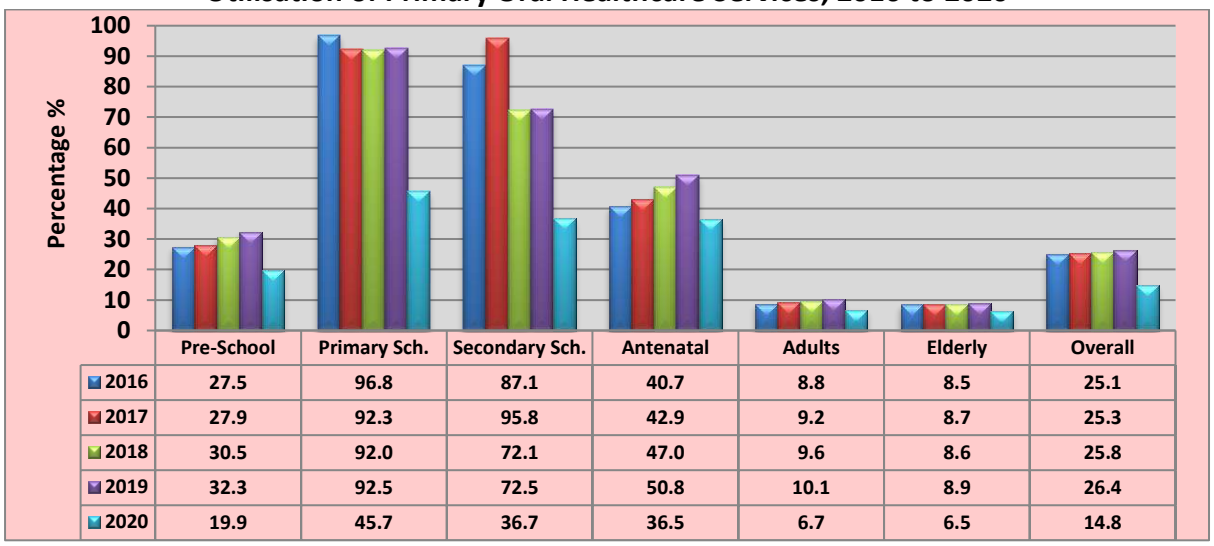
## Oral Healthcare Division

## PRIMARY ORAL HEALTHCARE

The delivery of primary oral healthcare services is targeted at infants and children aged 0 to 4 years old, preschool children aged 5 to 6 years old, school children aged 7 to 17 years old, special needs children, antenatal mothers, adults and the elderly.

In 2020, Malaysia had to face challenged brought on by the global COVID-19 pandemic. To pandemic, the government of Malaysia announced the Movement Control Order (MCO), effective 18 March 2020. Subsequently, most government and private sectors had to cease operations temporarily to curb the spread of COVID-19. The Oral Health Programme was also affected by this pandemic, whereby oral healthcare services could not be delivered as usual. Therefore, there was a significant decline in the utilisation of primary oral healthcare services in 2020 as opposed to the previous years **(Figure 3)**.

**Figure 3:**
**Utilisation of Primary Oral Healthcare Services, 2016 to 2020**




| | Pre-School | Primary Sch. | Secondary Sch. | Antenatal | Adults | Elderly | Overall |
|---|---|---|---|---|---|---|---|
| 2016 | 27.5 | 96.8 | 87.1 | 40.7 | 8.8 | 8.5 | 25.1 |
| 2017 | 27.9 | 92.3 | 95.8 | 42.9 | 9.2 | 8.7 | 25.3 |
| 2018 | 30.5 | 92.0 | 72.1 | 47.0 | 9.6 | 8.6 | 25.8 |
| 2019 | 32.3 | 92.5 | 72.5 | 50.8 | 10.1 | 8.9 | 26.4 |
| 2020 | 19.9 | 45.7 | 36.7 | 36.5 | 6.7 | 6.5 | 14.8 |

*Source: Health Informatics Centre, MOH*

The number of patients utilising the oral healthcare services by target groups for the past five years is shown in **Table 31**.

**Table 31:**
**Utilisation of Primary Oral Healthcare by Category of Patients, 2016 to 2020**

| Year | Preschool | Primary School | Secondary School | Antenatal | Adults | Elderly | Special need Children | Overall |
|---|---|---|---|---|---|---|---|---|
| **2016** | 1,001,064 | 2,785,178 | 1,933,640 | 225,843 | 1,702,521 | 249,966 | 57,881 | 7,956,093 |
| **2017** | 1,047,391 | 2,809,766 | 1,964,105 | 245,018 | 1,810,480 | 269,500 | 62,114 | 8,208,374 |
| **2018** | 1,146,680 | 2,861,585 | 1,944,312 | 257,609 | 1,918,086 | 292,665 | 68,339 | 8,489,276 |
| **2019** | 1,218,595 | 2,890,267 | 1,948,194 | 272,179 | 2,036,601 | 317,007 | 75,827 | 8,523,311 |
| **2020** | 710,199 | 1,376,852 | 974,604 | 189,687 | 1,331,228 | 226,471 | 38,044 | 4,847,085 |

*Source: Health Informatics Centre, MOH*

## Early Childhood Oral Healthcare for Toddlers

In 2020, the number of toddlers seen under the primary oral healthcare services declined compared to the previous years **(Table 32).** Cursory examination of the toddler's oral cavity through 'lift-the-lip' technique was conducted in health settings, such as at child healthcare centers or Mother and Child Health Clinics.

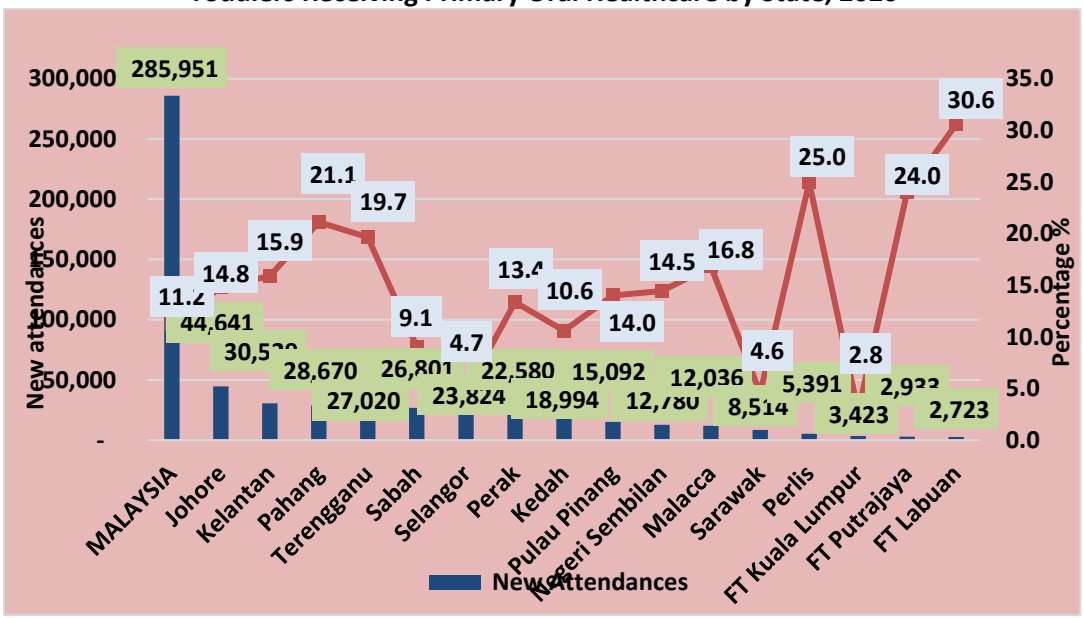
**Table 32:**
**Coverage of Toddlers, 2016 to 2020**

| Year | Toddler Estimated Population (0-4 years old) | No. of Toddler seen | Percentage of Toddler seen |
|---|---|---|---|
| 2016 | 2,634,800 | 341,664 | 13.0 |
| 2017 | 2,720,900 | 379,335 | 13.9 |
| 2018 | 2,727,100 | 425,887 | 15.6 |
| 2019 | 2,729,700 | 476,934 | 17.5 |
| 2020 | 2,542,000 | 285,951 | 11.2 |

*Source: Oral Health Programme, MOH*

In 2020, the FT Labuan followed by Perlis and FT Putrajaya recorded the highest coverage of toddlers **(Figure 4)**.

**Figure 4:**
**Toddlers Receiving Primary Oral Healthcare by State, 2020**




*Source: Oral Health Programme, MOH*

Clinical prevention programme such as fluoride varnish application for toddlers is conducted by cohorts with 4 applications for each toddler within a 2-year period. Initially, only 3 states namely Kelantan, Terengganu and Sabah were involved in this programme. However, its implementation has been expanded to all states starting from the year 2019. About 93.9 percent of children received their first fluoride varnish application in 2020 compared to 97.6 percent in 2019. Three states namely Kelantan, Sabah and Sarawak, were also involved in the weekly fluoride mouthrinse programme in 2020, involving 96 primary schools with 23,739 students.

## Oral Healthcare for Preschool Children

In 2020, there were 16,915 government and 5,339 private kindergartens including preschool institutions in Malaysia. The coverage of pre-schoolers from 2016 to 2020 is as tabulated in **Table 33.** The number of preschool children aged 0-6 years old receiving primary oral healthcare decreased in 2020 as compared to 2019 **(Table 34).** FT Labuan and Pahang recorded the highest coverage of preschool children in 2020 **(Figure 5)**.

**Table 33:**
**Coverage of Kindergartens and Preschools, 2016 to 2020**

| Year | No. of Government Kindergartens | No. of Private Kindergartens | Total no. of Kindergartens | % Government Kindergartens Coverage | % Private Kindergartens coverage |
|---|---|---|---|---|---|
| **2016** | 16,807 | 4,465 | 21,272 | 97.0 | 95.6 |
| **2017** | 16,714 | 4,531 | 21,245 | 96.1 | 90.4 |
| **2018** | 16,769 | 4,719 | 21,488 | 97.0 | 92.1 |
| **2019** | 16,867 | 4,932 | 21,799 | 97.1 | 97.2 |
| **2020** | 16,915 | 5,339 | 22,254 | 27.7 | 14.2 |

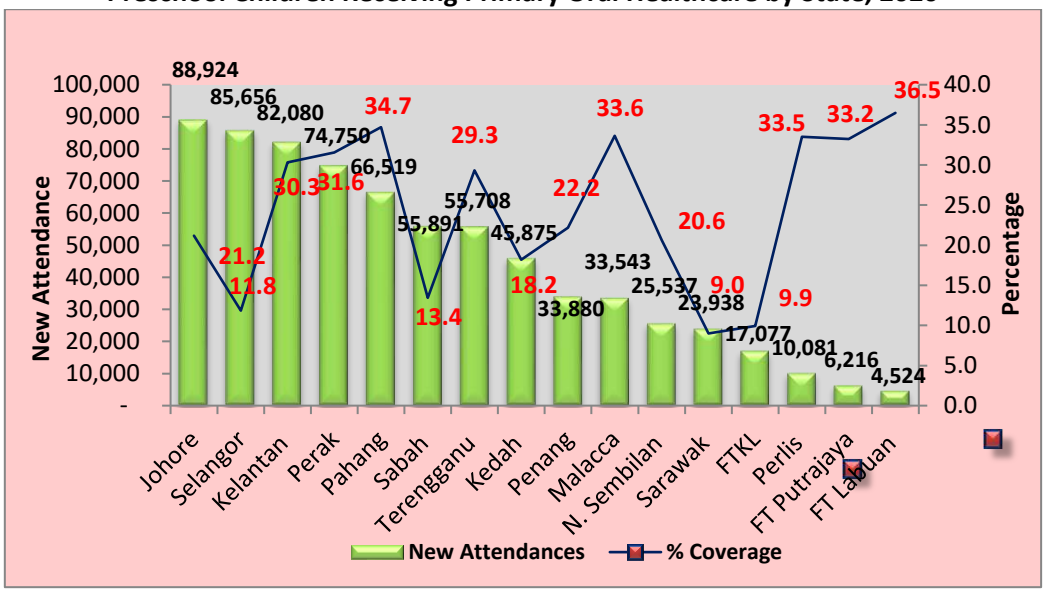
*Source: Health Informatics Centre, MOH*

**Table 34:**
**Coverage of preschool children, 2016 to 2020**

| Year | Estimated Preschool Population | No. of Preschool Children Covered | Percentage Coverage |
|---|---|---|---|
| **2016** | 3,637,700 | 1,001,064 | 27.5 |
| **2017** | 3,750,100 | 1,047,391 | 27.9 |
| **2018** | 3,755,300 | 1,146,680 | 30.4 |
| **2019** | 3,774,700 | 1,218,595 | 32.3 |
| **2020** | 3,577,400 | 710,199 | 19.9 |

*Source: Health Informatics Centre, MOH*

**Figure 5:**
**Preschool Children Receiving Primary Oral Healthcare by State, 2020**




*Source: Health Informatics Centre, MOH*

## Oral Healthcare for Schoolchildren

The School Oral Health Programme was most affected by the COVID-19 pandemic. Dental services in schools have not been possible since all schools were instructed by the Ministry of Education to be closed temporarily starting March 2020. This resulted in a significant drop in primary school coverage from 94.9 percent (2019) to 28.9 percent (2020) **(Table 35)**.

**Table 35:**
**Coverage of Primary Schools, 2016 to 2020**

| Year | Total No. of Primary School | No. of Primary School Covered | Percent Coverage of Primary School |
|---|---|---|---|
| **2016** | 7,847 | 7,606 | 96.9 |
| **2017** | 7,858 | 7,390 | 94.0 |
| **2018** | 7,851 | 7,420 | 94.5 |
| **2019** | 7,865 | 7,469 | 94.9 |
| **2020** | 7,851 | 2,274 | 28.9 |

*Source: Health Informatics Centre, MOH*

Most states achieved coverage of less than 50 percent except Perlis which was able to maintain 100 percent coverage **(Table 36)**.

**Table 36:**
**Coverage of Primary Schools by States, 2016 to 2020**

| State | Percentage of Coverage of Primary Schools | | | | |
|---|---|---|---|---|---|
| | **2016** | **2017** | **2018** | **2019** | **2020** |
| Perlis | 100 | 100 | 100 | 100 | 100 |
| Kedah | 100 | 99.6 | 99.8 | 100 | 27.5 |
| Pulau Pinang | 100 | 95.2 | 98.9 | 100 | 25.6 |
| Perak | 100 | 100 | 99.5 | 99.3 | 35.4 |
| Selangor | 99.4 | 94.2 | 99.8 | 79.8 | 22.1 |
| FT Kuala Lumpur | 100 | 100 | 100 | 100 | 26.7 |
| FT Putrajaya | 100 | 100 | 100 | 100 | 25.0 |
| N. Sembilan | 100 | 100 | 100 | 100 | 25.4 |
| Melaka | 100 | 99.6 | 100 | 100 | 38.5 |
| Johor | 100 | 100 | 100 | 100 | 35.1 |
| Pahang | 99.8 | 98.6 | 100 | 99.6 | 33.2 |
| Terengganu | 100 | 100 | 100 | 100 | 17.3 |
| Kelantan | 99.8 | 98.6 | 99.3 | 99.8 | 24.1 |
| FT Labuan | 100 | 100 | 100 | 100 | 47.1 |
| Sabah | 90.1 | 88.4 | 89.5 | 95.1 | 32.4 |
| Sarawak | 91.7 | 78.2 | 75.8 | 84.3 | 20.7 |
| **MALAYSIA** | **96.9** | **94.0** | **94.5** | **94.9** | **28.9** |

*Source: Health Informatics Centre, MOH*

In 2020, the coverage of primary schoolchildren also decreased markedly compared to the previous years **(Table 37).**

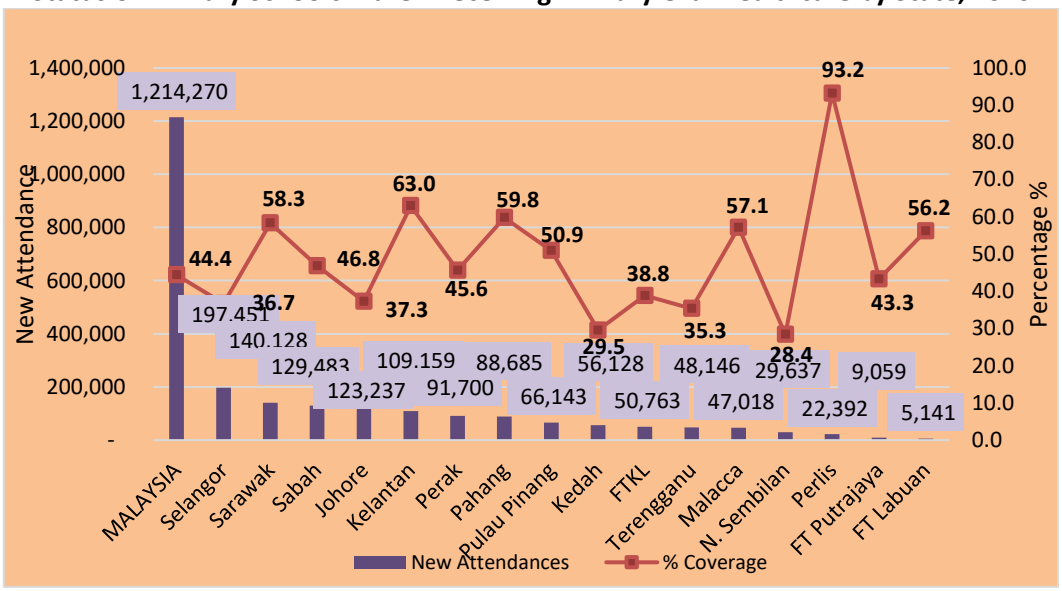
**Table 37:**
**Coverage of Primary Schoolchildren, 2016 to 2020**

| Year | Total Population of Primary Schoolchildren | No. of Primary Schoolchildren Covered | Percentage Coverage |
|---|---|---|---|
| **2016** | 2,677,950 | 2,649,420 | 98.9 |
| **2017** | 2,678,793 | 2,656,519 | 99.2 |
| **2018** | 2,689,218 | 2,670,944 | 99.3 |
| **2019** | 2,724,019 | 2,706,494 | 99.4 |
| **2020** | 2,735,590 | 1,214,270 | 44.4 |

*Source: Health Informatics Centre, MOH*

In 2020, almost all states could not achieve the target of primary schoolchildren coverage of more than 98 percent. Perlis recorded the highest percentage of student coverage at 93.2 percent **(Figure 6)**.

**Figure 6:**
**Status of Primary Schoolchildren Receiving Primary Oral Healthcare by State, 2020**




*Source: Health Informatics Centre, MOH*

The oral health status of primary schoolchildren also decreased slightly due to the decrease in the number of students examined compared to previous years. Of the total number of students examined in 2020, 81.7 percent were rendered orally-fit, 60.1 percent did not require treatment (NTR) and 34.5 percent were caries-free **(Table 38).**

**Table 38:**
**Percentage Primary Schoolchildren Orally-Fit, NTR and Caries-free, 2016 to 2020**

| Year | No of Primary Schoolchildren Covered | Percentage Case Completion | Percentage NTR | Percentage Maintained Caries-free Mouth |
|---|---|---|---|---|
| 2016 | 2,649,420 | 97.9 | 63.7 | 35.8 |
| 2017 | 2,656,519 | 97.0 | 63.4 | 37.1 |
| 2018 | 2,670,944 | 97.4 | 62.5 | 38.2 |
| 2019 | 2,706,494 | 96.9 | 62.5 | 38.3 |
| 2020 | 1,214,270 | 81.7 | 60.1 | 34.5 |

*Source: Health Informatics Centre, MOH*

All states did not achieve 95 percent of Case Completion in 2020. Johor achieved the highest percentage of schoolchildren with NTR status (77.7 percent) followed by Perak (71.0 percent) and Kedah (70.1 percent). As for caries-free children, FT Kuala Lumpur reported the highest proportion (55.7 percent) followed by Negeri Sembilan (54.4 percent) and Selangor (51.2 percent) **(Table 39)**.

**Table 39:**
**Oral Health Status of Primary Schoolchildren by State, 2020**

| State | Percentage Case Completion | Percentage No Treatment Required (NTR) | Percentage Maintained Caries-free |
|---|---|---|---|
| Perlis | 81.3 | 63.7 | 27.0 |
| Kedah | 91.4 | 70.8 | 33.8 |
| Pulau Pinang | 75.0 | 59.5 | 35.0 |
| Perak | 88.9 | 71.0 | 29.9 |
| Selangor | 80.6 | 61.4 | 51.2 |
| FT Kuala Lumpur | 78.9 | 63.1 | 55.7 |
| FT Putrajaya | 84.5 | 67.9 | 47.3 |
| N. Sembilan | 87.9 | 62.4 | 54.4 |
| Melaka | 87.1 | 56.7 | 34.2 |
| Johor | 90.9 | 77.7 | 43.8 |
| Pahang | 83.0 | 57.1 | 30.0 |
| Terengganu | 76.9 | 53.8 | 24.7 |
| Kelantan | 73.8 | 33.7 | 18.4 |
| FT Labuan | 82.8 | 49.8 | 21.2 |
| Sabah | 82.1 | 55.6 | 10.9 |
| Sarawak | 74.2 | 59.1 | 35.2 |
| **MALAYSIA** | **81.7** | **60.1** | **34.5** |

*Source: Health Informatics Centre, MOH*

The gingival health status of primary schoolchildren was assessed based on the Gingival Index for Schoolchildren (GIS) 2013 Guidelines implemented since 2014. It was found that 82.9 percent of primary schoolchildren had a GIS score of 0 in 2020. Comparison of GIS scores for primary school students as in **Table 40**.

**Table 40:**
**GIS score for Primary Schoolchildren, 2017 to 2020**

| Year | New attendances | GIS 0 (percent) | GIS 1 (percent) | GIS 2 (percent) | GIS 3 (percent) |
|---|---|---|---|---|---|
| **2017** | 2,629,005 | 2,036,310 (77.5) | 128,316 (4.9) | 324,031 (12.3) | 140,347 (5.3) |
| **2018** | 2,665,769 | 2,129,361 (79.9) | 148,326 (5.6) | 262,569 (9.8) | 125,513 (4.7) |
| **2019** | 2,706,494 | 2,195,260 (81.1) | 158,975 (5.9) | 231,449 (8.6) | 120,810 (4.5) |
| **2020** | 1,214,270 | 1,006,433 (82.9) | 67,601 (5.6) | 92,515 (7.6) | 47,721 (3.9) |

*Source: Oral Health Programme, MOH*

## Secondary Schoolchildren

The delivery of oral health services in secondary schools was also affected by the COVID-19 pandemic where schools were also ordered to close to curb the spread of COVID-19. In 2020, secondary school coverage dropped to 27.9 percent, its lowest coverage in 5 years since 2016 **(Table 41)**.

**Table 41:**
**Coverage of Secondary Schools, 2016 to 2020**

| Year | Total No. of Secondary Schools | No. of Secondary Schools Covered | Coverage of Secondary Schools (Percentage) |
|---|---|---|---|
| **2016** | 2,558 | 2,196 | 86.7 |
| **2017** | 2,563 | 2,142 | 83.6 |
| **2018** | 2,567 | 2,247 | 87.5 |
| **2019** | 2,544 | 2,314 | 91.0 |
| **2020** | 2,526 | 706 | 27.9 |

*Source: Health Informatics Centre, MOH*

Most states did not achieve the secondary school coverage target of 94 percent in 2020 compared to the previous years. However, Perlis achieved the highest coverage of 93.5 percent followed by Kelantan at 84.3 percent **(Table 42)**.

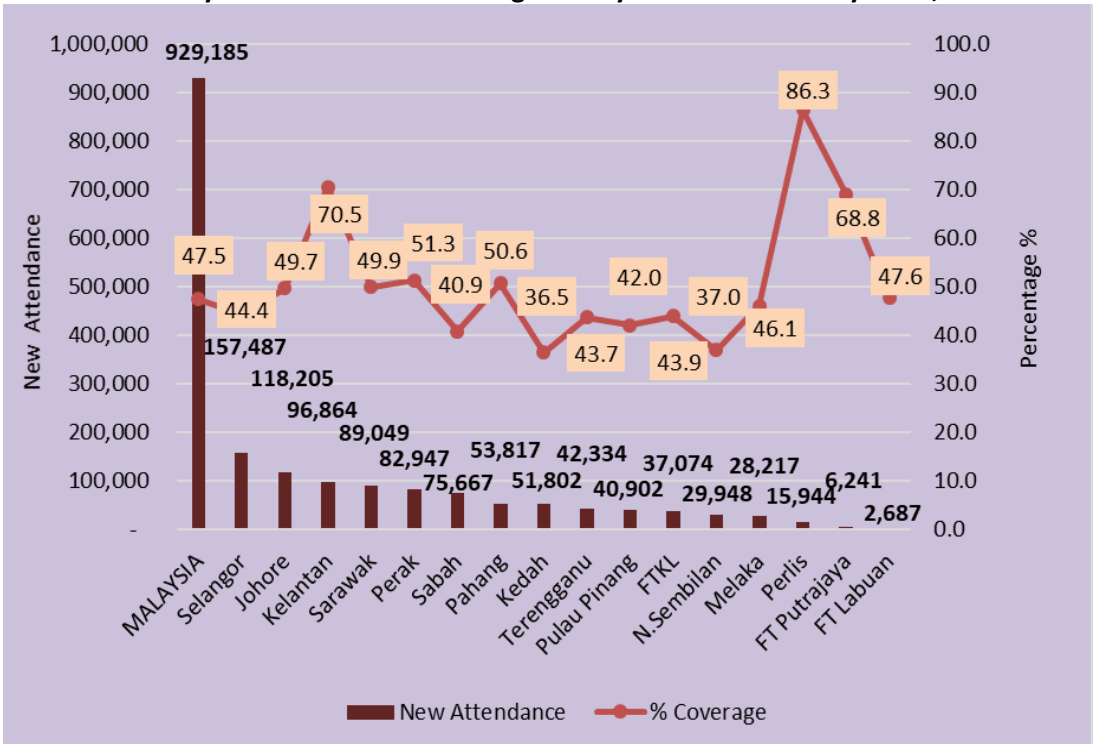
**Table 42:**
**Secondary School Coverage under Incremental Dental Care by State, 2016 to 2020**

| State | Percentage of Secondary Schools Covered | | | | |
|---|---|---|---|---|---|
| | **2016** | **2017** | **2018** | **2019** | **2020** |
| Perlis | 100 | 100 | 100 | 100 | 93.5 |
| Kedah | 99.5 | 91.6 | 98.0 | 100 | 25.6 |
| Pulau Pinang | 100.0 | 94.4 | 97.7 | 100 | 23.4 |
| Perak | 100.0 | 100 | 99.3 | 99.2 | 31.2 |
| Selangor | 94.2 | 72.9 | 89.6 | 92.1 | 23.7 |
| FT Kuala Lumpur | 100 | 100 | 100 | 100 | 35.7 |
| FT Putrajaya | 100 | 100 | 100 | 100 | 36.4 |
| N.Sembilan | 100 | 100 | 100 | 100 | 33.1 |
| Melaka | 100 | 100 | 100 | 100 | 36.7 |
| Johor | 100 | 100 | 100 | 100 | 30.1 |
| Pahang | 99.6 | 98.7 | 100 | 100 | 30.1 |
| Terengganu | 99.4 | 99.4 | 98.8 | 99.4 | 30.3 |
| Kelantan | 60.9 | 68.4 | 71.4 | 84.6 | 84.3 |
| FT Labuan | 100 | 100 | 100 | 100 | 30.0 |
| Sabah | 47.2 | 48.9 | 57.7 | 65.1 | 17.4 |
| Sarawak | 40.8 | 32.3 | 38.1 | 50.8 | 16.8 |
| **MALAYSIA** | **84.1** | **86.7** | **87.5** | **91.0** | **27.9** |

*Source: Health Informatics Centre, MOH*

In 2020, only 47.5 percent of secondary schoolchildren were screened compared to 97.2 percent in 2019**.** Perlis recorded the highest coverage of secondary schoolchildren (86.3 percent) followed by Kelantan (70.5 percent) **(Figure 7).**

**Figure 7:**
**Secondary Schoolchildren Receiving Primary Oral Healthcare by State, 2020**




*Source: Health Informatics Centre, MOH*

The oral health status among secondary schoolchildren dipped slightly due to the substantial reduction in the total number of new attendances **(Table 43)**. Not withstanding, 82.3 percent, 67.6 percent and 58.9 percent of secondary schoolchildren were found to be orally-fit, of NTR status and free of caries respectively in 2020.

**Table 43:**
**Percentage Secondary Schoolchildren Orally-Fit, NTR and Caries-free, 2016 to 2020**

| Year | No of Secondary Schoolchildren Covered | Percentage Case Completion | Percentage NTR | Percentage Maintained Caries-free |
|---|---|---|---|---|
| **2016** | 1,934,828 | 94.2 | 68.8 | 58.8 |
| **2017** | 1,936,477 | 92.5 | 68.3 | 59.2 |
| **2018** | 1,926,123 | 93.6 | 67.7 | 59.1 |
| **2019** | 1,896,608 | 94.5 | 68.4 | 60.1 |
| **2020** | 929,185 | 82.3 | 67.6 | 58.9 |

*Source: Health Informatics Centre, MOH*

In 2020, most states did not meet the target for orally-fit children. The lowest NTR and caries-free status for secondary schoolchildren were recorded in the state of Sabah **(Table 44).**

**Table 44:**
**Oral Health Status of Secondary Schoolchildren, 2020**

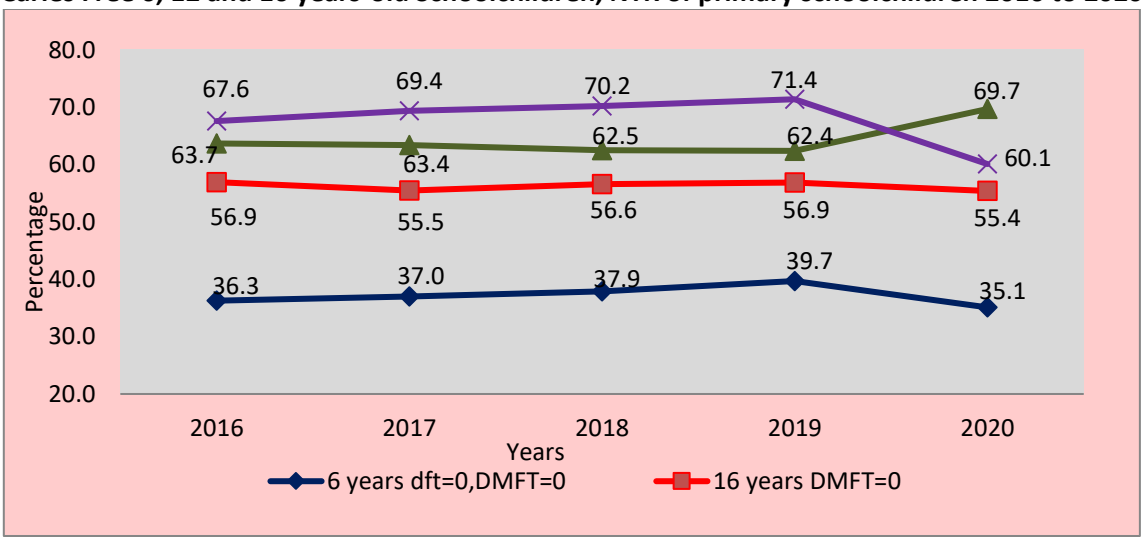
| States | Percentage Case Completion | Percentage NTR | Percentage Caries-free Mouth |
|---|---|---|---|
| Perlis | 82.6 | 69.4 | 58.5 |
| Kedah | 87.5 | 77.8 | 69.0 |
| Pulau Pinang | 85.2 | 74.9 | 63.8 |
| Perak | 88.7 | 75.2 | 68.5 |
| Selangor | 86.4 | 75.0 | 76.4 |
| FT Kuala Lumpur | 90.4 | 80.8 | 77.4 |
| FT Putrajaya | 89.2 | 78.1 | 68.9 |
| N. Sembilan | 91.4 | 74.0 | 71.7 |
| Melaka | 87.4 | 57.3 | 62.5 |
| Johor | 88.1 | 75.4 | 70.0 |
| Pahang | 82.9 | 60.5 | 49.6 |
| Terengganu | 83.7 | 62.7 | 43.0 |
| Kelantan | 67.4 | 52.7 | 36.1 |
| FT Labuan | 96.0 | 76.1 | 52.7 |
| Sabah | 74.1 | 48.8 | 28.2 |
| Sarawak | 70.5 | 60.5 | 47.0 |
| **MALAYSIA** | **82.3** | **67.6** | **58.9** |

*Source: Health Informatics Centre, MOH*

## Impact Indicators - Caries-free 6, 12 and 16 year-old Schoolchildren and NTR for Primary Schoolchildren

Overall, the oral health status of school children in 2020 showed a decline. However, there was an increase in the percentage of caries-free 12 year-old schoolchildren compared to the previous year (69.7 percent) **(Figure 8)**.

**Figure 8:**
**Caries Free 6, 12 and 16 years-old Schoolchildren, NTR of primary schoolchildren 2016 to 2020**




*Source: Health Informatics Centre, MOH*

For 16-year-old shoolchildren, Selangor showed the highest achievement for caries-free status (74.7 percent) while Sabah recorded the lowest achievement (25.1 percent) **(Table 45)**.

**Table 45:**
**Percentage of 16-year-old children with caries-free status by State, 2016 to 2020**

| State | 2016 | 2017 | 2018 | 2019 | 2020 |
|---|---|---|---|---|---|
| Perlis | 57.8 | 60.0 | 94.1 | 54.4 | 56.1 |
| Kedah | 67.3 | 65.4 | 95.8 | 67.2 | 65.6 |
| Pulau Pinang | 60.0 | 60.2 | 97.3 | 61.9 | 59.8 |
| Perak | 63.0 | 62.8 | 97.4 | 65.8 | 65.0 |
| Selangor | 75.7 | 72.7 | 96.3 | 74.3 | 74.7 |
| FT Kuala Lumpur | 75.8 | 76.1 | 96.9 | 75.7 | 74.2 |
| FT Putrajaya | 70.0 | 62.8 | 94.4 | 61.6 | 64.4 |
| N. Sembilan | 68.6 | 67.4 | 96.7 | 68.4 | 68.4 |
| Melaka | 56.3 | 56.2 | 96.9 | 58.5 | 57.7 |
| Johor | 68.8 | 68.2 | 96.1 | 68.0 | 66.0 |
| Pahang | 47.2 | 44.0 | 96.0 | 45.4 | 43.8 |
| Terengganu | 33.1 | 32.4 | 94.6 | 34.7 | 37.3 |
| Kelantan | 26.6 | 29.0 | 93.3 | 31.7 | 32.1 |
| FT Labuan | 35.3 | 35.1 | 95.5 | 49.7 | 53.4 |
| Sabah | 21.7 | 22.9 | 86.1 | 24.4 | 25.1 |
| Sarawak | 42.7 | 41.0 | 82.0 | 43.7 | 42.6 |
| **MALAYSIA** | **56.9** | **55.5** | **56.6** | **56.9** | **55.4** |

*Source: Health Informatics Centre, MOH*

Mean DMFT for 12-year-old and 16-year-old children has shown an increase in 2020 compared to 2019 **(Table 46)**.

**Table 46:**
**Mean DMFT Score for 12 and 16-year-olds, 2016 to 2020**

| Age Group | 2016 | 2017 | 2018 | 2019 | 2020 |
|---|---|---|---|---|---|
| 12-year-old | 0.79 | 0.75 | 0.71 | 0.68 | 0.71 |
| 16-year-old | 1.34 | 1.40 | 1.35 | 1.31 | 1.38 |

*Source: Health Informatics Centre, MOH*

As for the gingival health status of secondary schoolchildren based on the 2013 GIS Guidelines, it was found that 72.2 percent of children had a GIS score of 0 in 2020. There was a significant decrease in the number of students screened for GIS in 2020 compared to 2019 due to school closures by Ministry of Education (MoE). The comparison of GIS scores for secondary school students is shown in **Table 47**.

**Table 47:**
**GIS score for Secondary Schoolchildren, 2017 to 2020**

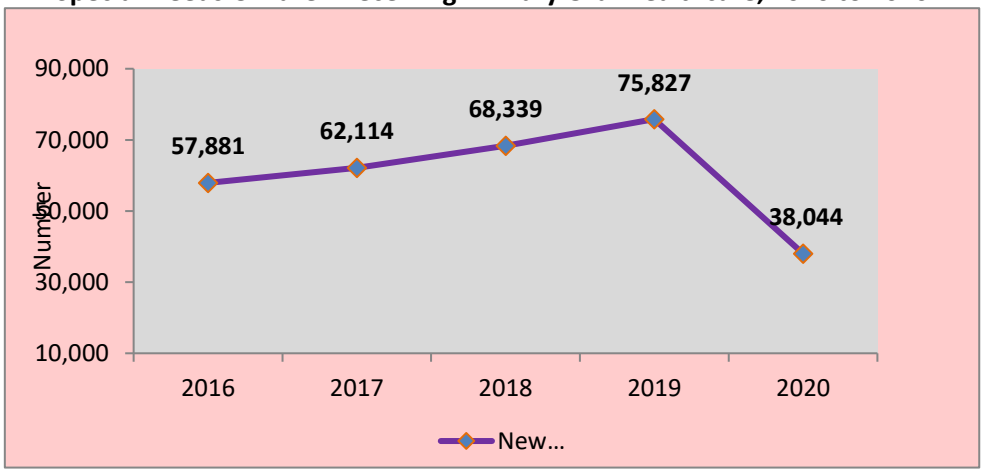
| Year | New attendances | GIS 0 | GIS 1 | GIS 2 | GIS 3 |
|---|---|---|---|---|---|
| 2017 | 1,923,699 | 1,346,571 (70.0) | 128,733 (6.7) | 239,033 (12.4) | 209,368 (10.9) |
| 2018 | 1,923,072 | 1,365,278 (70.7) | 165,474 (8.6) | 204,602 (10.6) | 187,718 (9.7) |
| 2019 | 1,896,608 | 1,371,551 (72.3) | 167,445 (8.8) | 184,359 (9.7) | 173,253 (9.1) |
| 2020 | 929,185 | 671,133 (72.2) | 85,727 (9.2) | 90,000 (9.7) | 82,325 (8.9) |

*Source: Oral Health Programme, MOH*

## Oral Healthcare for Special Needs Children

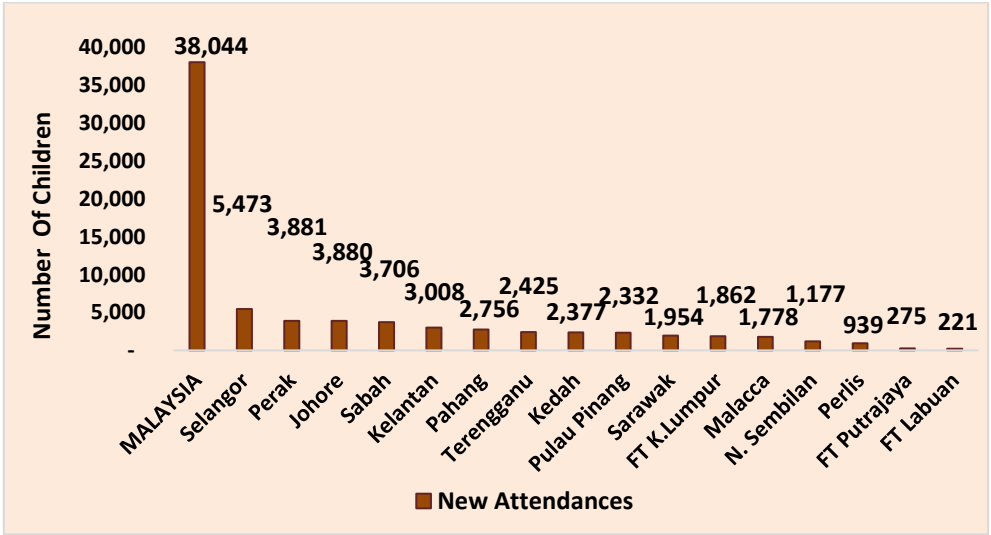
The number of special needs children who received primary oral healthcare services decreased significantly in 2020 after steady increment for the past few years. A total of 38,044 children with special needs received primary oral healthcare services in 2020 **(Figure 9).** The highest number of special needs children were seen in Selangor, Perak and Johor **(Figure 10).**

**Figure 9:**
**Special Needs Children Receiving Primary Oral Healthcare, 2016 to 2020**




*Source: Health Informatics Centre, MOH*

**Figure 10:**
**Children with Special Needs Receiving Primary Oral Healthcare by State, 2020**



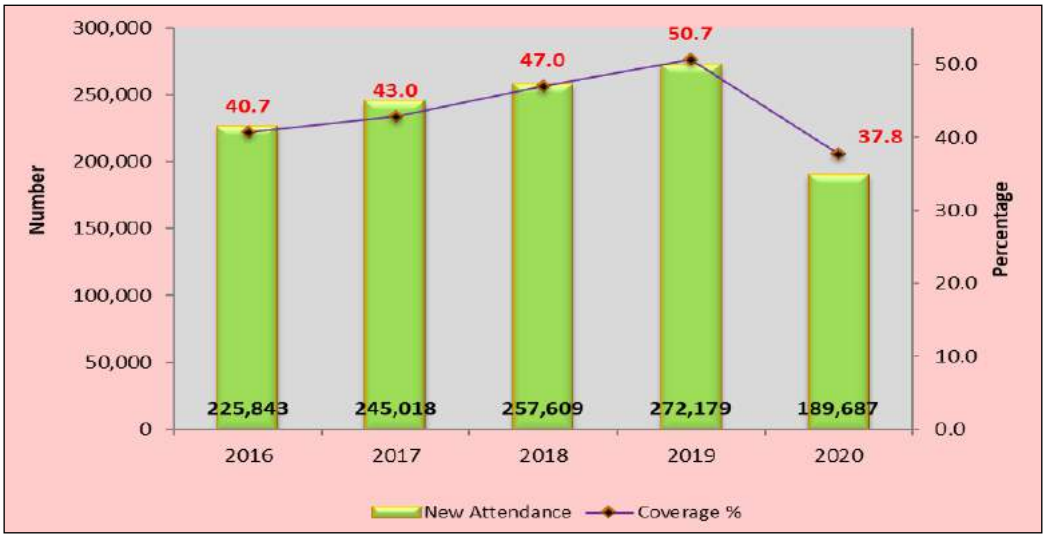

*Source: Health Informatics Centre, MOH*

## Oral Healthcare for Antenatal Mothers

Various efforts were taken to increase the attendance of antenatal mothers at dental clinics by way of referrals from MCH clinics and health clinics so as to ensure that mothers whom are considered as agents of change received essential oral health awareness as well as to render them orally-fit. However, in 2020, oral health services to antenatal mothers were also affected by this pandemic, resulting in a decrease in the number of antenatal mothers examined by dental officers compared to the previous year **(Figure 11).**

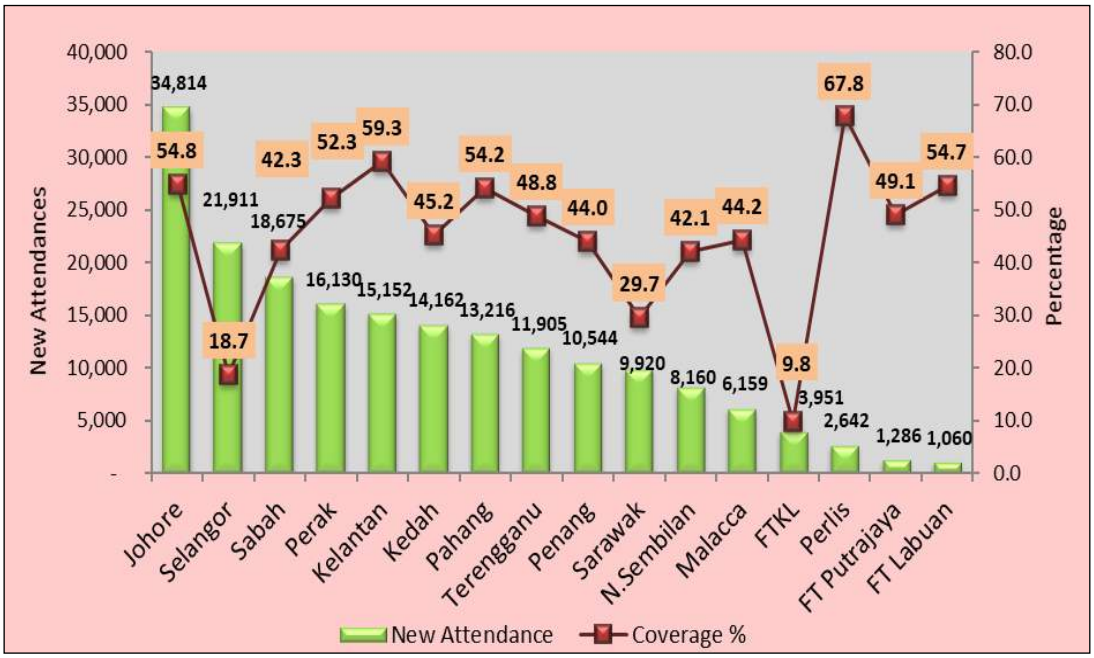
The highest coverage of antenatal mothers was in Perlis (67.8 percent) and Kelantan (59.3 percent) **(Figure 12)**.

**Figure 11:**
**Coverage of Antenatal Mothers, 2016 to 2020**




*Source: Health Informatics Centre, MOH*

**Figure 12:**
**Antenatal Mothers Receiving Primary Oral Healthcare by State, 2020**



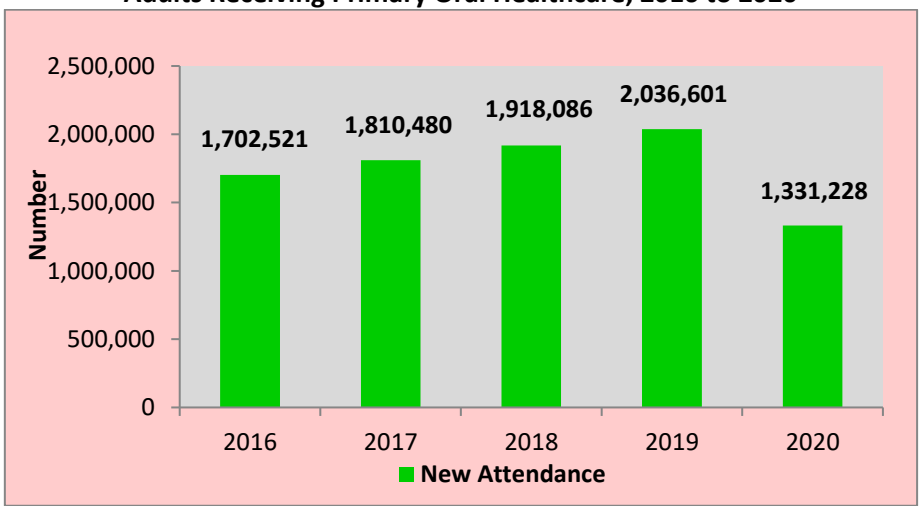

*Source: Health Informatics Centre, MOH*

## Oral Healthcare for Adults

Oral healthcare services for adults are delivered through outpatient services. In 2020, the number of dental clinics with two (2) or more dental officers offering outpatient services on a daily basis had increased (86 percent)(582/677)) compared to 2019 (84.4 percent). However, due to the COVID-19 pandemic, dental clinics only offered emergency dental

treatment and all elective treatment were postponed. This resulted in a decrease in the number of adult patients who received oral healthcare services in 2020 **(Figure 13).**

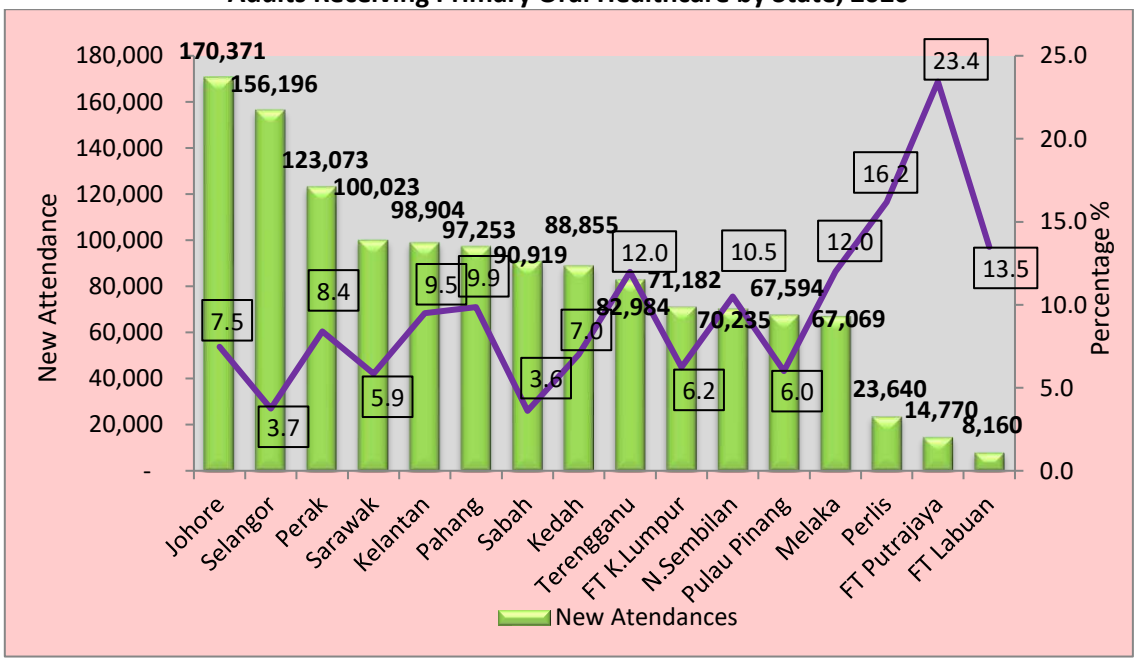
**Figure 13:**
**Adults Receiving Primary Oral Healthcare, 2016 to 2020**




*Source: Health Informatics Centre, MOH*

A total of 6.7 percent of the adult population (18-59 year old) received primary oral healthcare services in 2020. FT Putrajaya (23.4 percent) recorded the highest percentage of coverage followed by Perlis (16.2 percent) and FT Labuan (13.5 percent) **(Figure 13)**.

**Figure 13:**
**Adults Receiving Primary Oral Healthcare by State, 2020**

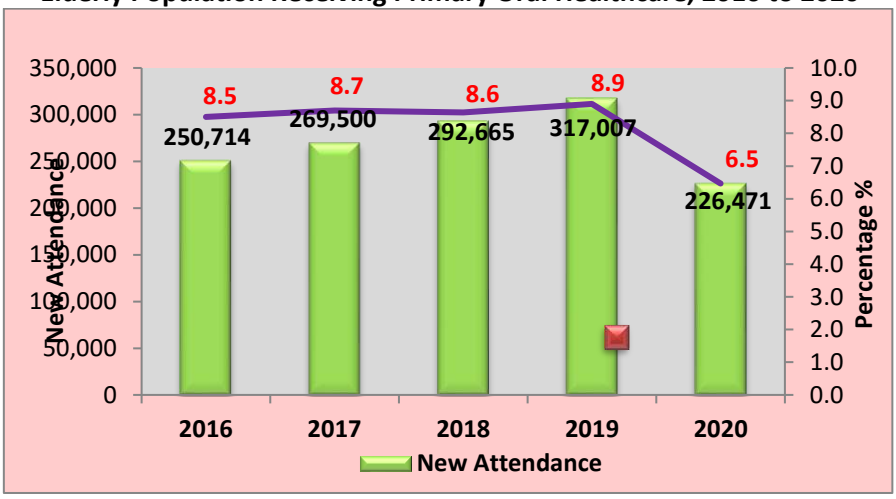



*Source: Health Informatics Centre, MOH*

## Oral Healthcare for Elderly

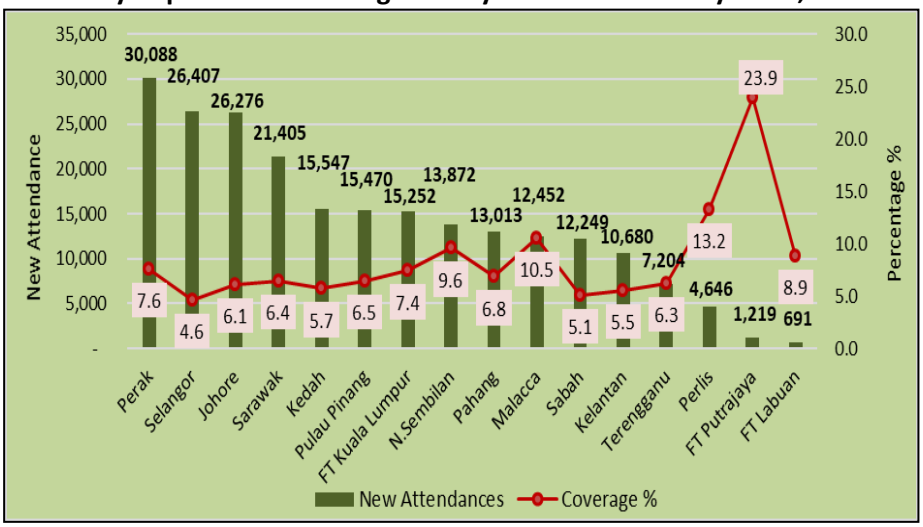
In 2020, 6.5 percent (226,471) of the elderly population received primary oral healthcare services; a decrease from 2019 (8.9 percent) **(Figure 14)**. The highest coverage was in FT Putrajaya (23.9 percent) followed by Perlis (13.2 percent) and Melaka (10.5 percent) **(Figure 15)**.

**Figure 14:**
**Elderly Population Receiving Primary Oral Healthcare, 2016 to 2020**




*Source: Health Informatics Centre, MOH*

**Figure 15:**
**Elderly Population Receiving Primary Oral Healthcare by State, 2020**




*Source: Health Informatics Centre, MOH*

The oral health status of the elderly is still unsatisfactory. In 2020, only 41.7 percent of 60-year-olds had 20 or more teeth **(Table 48)**. It would be pertinent to note that this achievement is still far from the National Oral Health Plan (NOHP) 2011-2020 targeted goal of 60 percent elderly with 20 teeth or more by 2020.

**Table 48:**
**Oral Health Status of the Elderly, 2016 to 2020**

| Age group (years) | Average no. of teeth present | | | | | Edentulous ( percent ) | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | 2016 | 2017 | 2018 | 2019 | 2020 | 2016 | 2017 | 2018 | 2019 | 2020 |
| **60** | 15.8 | 16.1 | 16.2 | 16.3 | 16.1 | 7.8 | 8.0 | 7.0 | 7.1 | 6.7 |
| **65** | 14.0 | 14.3 | 14.6 | 14.7 | 14.6 | 11.1 | 10.4 | 9.6 | 9.3 | 9.1 |
| **75 and above** | 10.4 | 10.5 | 10.6 | 10.8 | 10.6 | 21.4 | 20.6 | 19.8 | 19.4 | 18.8 |

| Age group (years) | With 20 or more teeth ( percent ) | | | | |
|---|---|---|---|---|---|
| | 2016 | 2017 | 2018 | 2019 | 2020 |
| **60** | 40.3 | 41.4 | 41.6 | 43.2 | 41.7 |
| **65** | 31.1 | 32.5 | 33.8 | 35.1 | 34.1 |
| **75 and above** | 19.5 | 19.8 | 19.9 | 20.5 | 19.7 |

*Source: Health Informatics Centre, MOH*

## KEPP (*Klinik Endodontik di Perkhidmatan Primer)*

There were 50 KEPP in 2020 which offer endodontic treatment. Identified dental officers were trained to undertake endodontics on anterior and posterior teeth using rotary instruments. In 2020, a total of 1,245 endodontic cases were completed; a decrease from 2019 (2,862 endodontic cases completed) as endodontics is considered as elective treatment and had to be postponed during the pandemic **(Table 49)**.

**Table 49:**
**Completed Endodontic Cases in KEPP, 2016 to 2020**

| Year | Number of Completed Endodontic Cases | | | | Total cases |
|---|---|---|---|---|---|
| | Anterior | Premolar | Molar | Retreatment | |
| **2016** | 899 | 543 | 1,170 | 99 | 2,711 |
| **2017** | 554 | 397 | 1,226 | 49 | 2,226 |
| **2018** | 491 | 446 | 1,274 | 38 | 2,249 |
| **2019** | 578 | 459 | 1,762 | 63 | 2,862 |
| **2020** | 269 | 235 | 741 | 15 | 1,245 |

*Source: Oral Health Programme, MOH*

## Workload of Dental Providers, 2020

The workload of the dental providers is collected and kept in the Health Information Management System (HIMS)-Oral Health Subsystem which began in 1981. These data serve as basis for monitoring performance and guidance for future planning towards improving the oral healthcare delivery system. Some of the basic dental procedures conducted by Dental Officers and Dental Therapists in 2020 are as below **(Table 50)**.

**Table 50:**
**Workload of Dental Officers and Dental Therapists by Dental Procedure, 2020**

| Dental Procedure | Dental Officer | Dental Therapist | TOTAL |
|---|---|---|---|
| Restoration | 740,016 | 378,520 | 1,118,536 |
| Scaling | 339,573 | 84,499 | 424,072 |
| Periodontal Cases | 269 | - | 269 |
| Fissure Sealant | 39,561 | 199,422 | 238,983 |
| Tooth Extraction | 1,115,063 | 160,109 | 1,275,172 |
| Surgical Tooth Extraction | 4,279 | - | 4,279 |
| Abscess Management | 135,699 | - | 135,699 |
| Endodontic | 9,608 | - | 9,608 |
| Crown & Bridges | 273 | - | 273 |
| Partial Denture | 41,128 | - | 41,128 |
| Full Denture | 37,539 | - | 37,539 |
| **TOTAL** | **2,463,008** | **822,550** | **2,463,008** |

*Source: Health Informatics Centre, MOH*

## Other Activities, 2020

a. Workshop on *Latihan Kad LP8 Baharu Dan Penggabungan Reten,* from 25 to 27 February 2020.
b. Revision of Guidelines on Oral Healthcare for Toddlers and School Dental Services.
c. Monitoring of patient attendance and dental staff health status during Movement Control Order (MCO) period at Primary Dental Clinics.

## SPECIALIST ORAL HEALTHCARE

There are nine (9) dental specialties in MOH and the specialties are divided into two categories; Hospital Based and Non-Hospital Based specialties. Overall, in 2020, there were 399 dental specialists in MOH **(Table 51).**

**Table 51:**
**Number of Dental Specialists in MoH, 2016 to 2020**

| Year / Specialty | 2016 | 2017 | 2018 | 2019 | 2020 |
|---|---|---|---|---|---|
| **Hospital Based Specialties** | | | | | |
| Oral and Maxillofacial Surgery | 64 | 75 | 77 | 81 | 84 |
| Paediatric Dentistry | 38 | 38 | 45 | 46 | 49 |
| Oral Pathology & Oral Medicine | 11 | 15 | 15 | 15 | 15 |
| Special Care Dentistry | 4 | 4 | 6 | 6 | 7 |
| Forensic Dentistry | 1 | 1 | 1 | 2 | 3 |
| **Non-Hospital Based Specialties** | | | | | |
| Orthodontic | 52 | 64 | 70 | 70 | 80 |
| Periodontic | 34 | 36 | 41 | 44 | 49 |
| Restorative Dentistry | 24 | 28 | 34 | 37 | 40 |
| Dental Public Health Specialist | 93 | 86 | 86 | 80 | 72 |
| **TOTAL** | **321** | **347** | **375** | **381** | **399** |

*(Not inclusive of specialist undergoing gazettement and Contract Dental Specialist)*
*Source: Oral Health Programme, MOH*

Mapping of specialist services was done to ensure appropriate distribution of existing specialists based on needs and also to identify future training requirements for all specialties. The expansion of four (4) dental specialist services was undertaken for nine (9) dental facilities in 2020 **(Table 52).**

**Table 52:**
**New Dental Specialty Services Established in 2020**

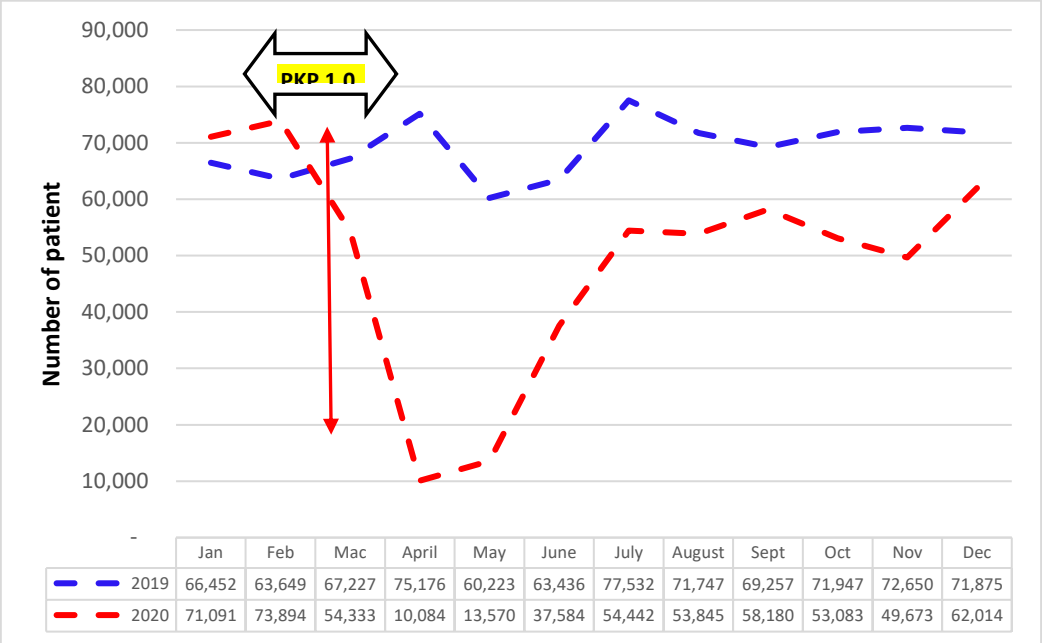
| Specialty | Facility |
|---|---|
| Special Care Dentistry | *Hospital Umum Sarawak, Kuching* |
| Orthodontic | *Klinik Pergigian Bayan Lepas, Pulau Pinang* |
| | *Klinik Pergigian Greentown, Ipoh Perak* |
| Periodontic | *Klinik Pergigian Kuala Kangsar, Perak* |
| | *Klinik Pergigian Sandakan, Sabah* |
| Restorative Dentistry | *Klinik Pergigian Sri Iskandar, Perak* |
| | *Klinik Pergigian Puchong, Selangor* |
| | *Klinik Pergigian Yong Peng, Batu Pahat Johor* |

*Source: MOH Dental Specialists Database*

In response to the surge of COVID-19 cases, the Malaysian government imposed Movement Control Order (MCO) which came into effect on 18 March 2020 and was extended to 15 May 2020. Therefore, the MCO affected the specialist oral healthcare services as well, evident

from the sharp decrease of about 60 percent of patient attendances during this period **(Figure 16).**

**Figure 16:**
**Total number of patients attending specialist dental clinic during MCO 1.0, 2019 to 2020**




| | Jan | Feb | Mac | April | May | June | July | August | Sept | Oct | Nov | Dec |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2019 | 66,452 | 63,649 | 67,227 | 75,176 | 60,223 | 63,436 | 77,532 | 71,747 | 69,257 | 71,947 | 72,650 | 71,875 |
| 2020 | 71,091 | 73,894 | 54,333 | 10,084 | 13,570 | 37,584 | 54,442 | 53,845 | 58,180 | 53,083 | 49,673 | 62,014 |

*Source: Health Informatics Centre, MOH*

## Dental Specialist Meetings

Dental Specialist Meetings are organised annually for each discipline to discuss Annual Plan of Actions, Achievements, Key Performance Indicators, Patient Safety Indicators and issues pertaining to each specialty. In 2020, ten (10) Dental Specialist Meetings were held and these include a Combined Dental Specialists Meeting **(Table 53).**

**Table 53:**
**Dental Specialist Meetings Organised, 2020**

| Specialty | Date | Venue |
|---|---|---|
| Oral and Maxillofacial Surgery | 5 to 6 February | Hotel Concorde, Shah Alam |
| Forensic Dentistry | | |
| Restorative Dentistry | 19 to 20 February | Best Western i-City, Shah Alam |
| Special Care Dentistry | 14 May | Oral Health Programme, MOH (Virtually) |
| Paediatric Dentistry | 4 June | |
| Periodontics | 6 July | |
| Orthodontics | 13 July | |
| Oral Pathology Oral Medicine | 27 July | |
| Dental Public Health | 12 to 13 August | Hotel Royale Chulan, Seremban |
| Combined Dental Specialist Meeting | 30 September to 1 October | Holiday Villa Hotel & Convention Centre, Subang |

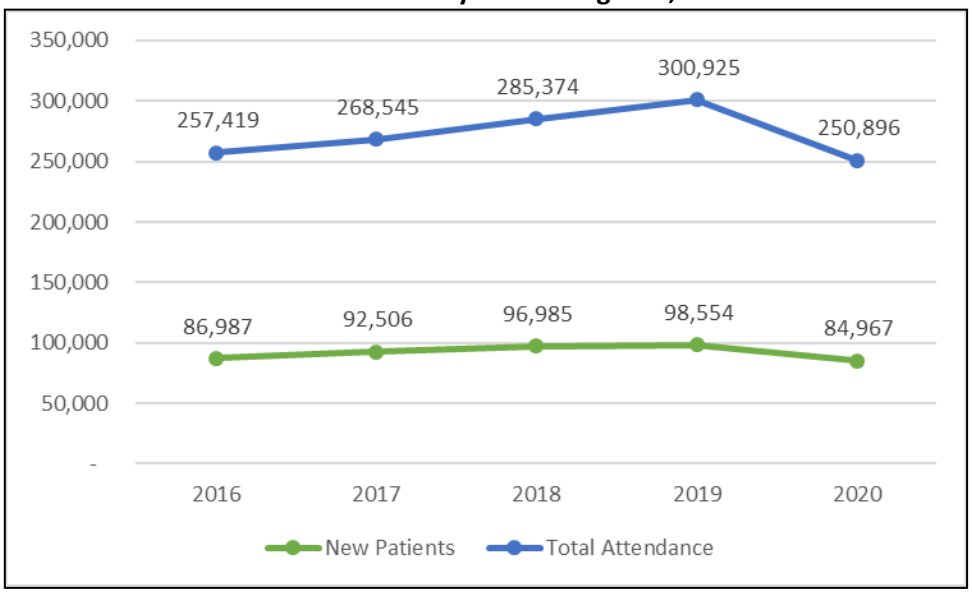
*Source: Oral Health Programme, MOH*

## Hospital Based Dental Specialties

- **Oral And Maxillofacial Surgery (OMFS)**

There was a gradual increase of total attendance for OMFS patients in the last five years except has decreased to 16.6 percent in 2020 (250,896) as compared to 2019 (300,925) due to the COVID-19 pandemic **(Figure 17).**

**Figure 17:**
**Number of Patients Seen by OMFS Surgeons, 2016 to 2020**



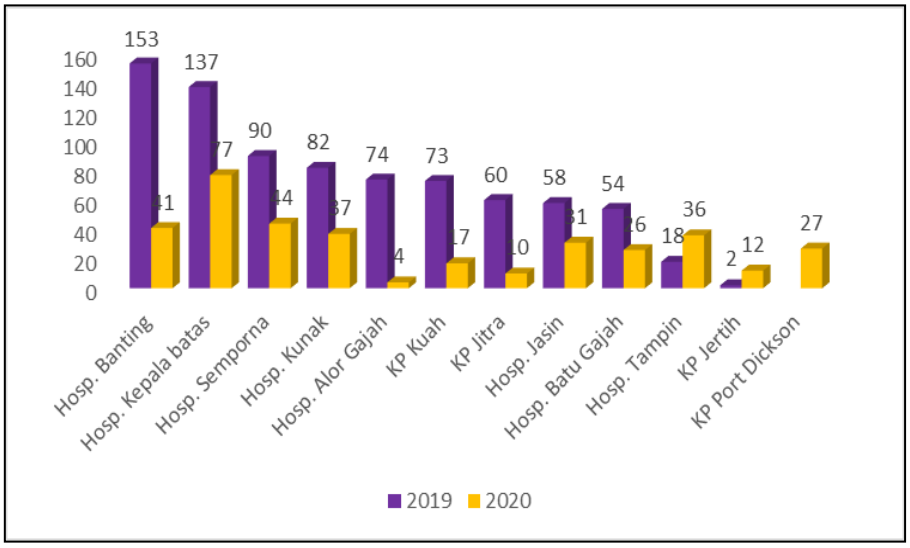

*Source: Health Informatics Centre, MOH*

Almost 91 percent of all oral surgeries performed in 2020 were minor surgical cases. Majority were pre-prosthetic and pre-orthodontic procedures, removal of impacted teeth, biopsies, excision or ablative surgeries and removal of retained or displaced roots. Major surgery cases accounted for 9.2 percent (2,371) of total surgery cases which comprised of surgical removal of malignant lesions, primary or secondary facial reconstruction, cleft lip and palate repair, orthognathic surgery and distraction osteogenesis.

**Oral and Maxillofacial Cluster Services**

Oral and Maxillofacial Surgery cluster services programme was piloted in Perak, Kedah and Sabah since 2018 and was fully implemented in 2019 involving Pulau Pinang, Kedah, Perak, Selangor, Melaka and Sabah. Among the cluster hospitals, Hospital Banting, Kepala Batas, Semporna, Kunak and Alor Gajah were the top five (5) hospitals with the highest attendances. However due to the COVID-19 pandemic, services have been affected. As of 2020, additional cluster service was undertaken at Port Dickson dental clinic **(Figure 18).**

**Figure 18:**
**Number of Patients Seen from OMFS Cluster Services, 2019 to 2020**

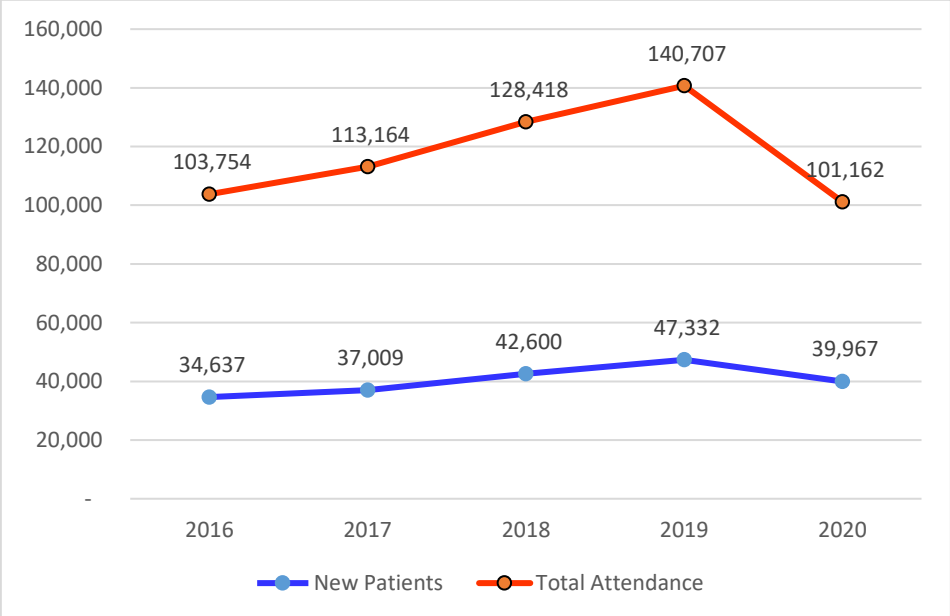



*Source: Health Informatics Centre, MOH*

- **Paediatric Dentistry**

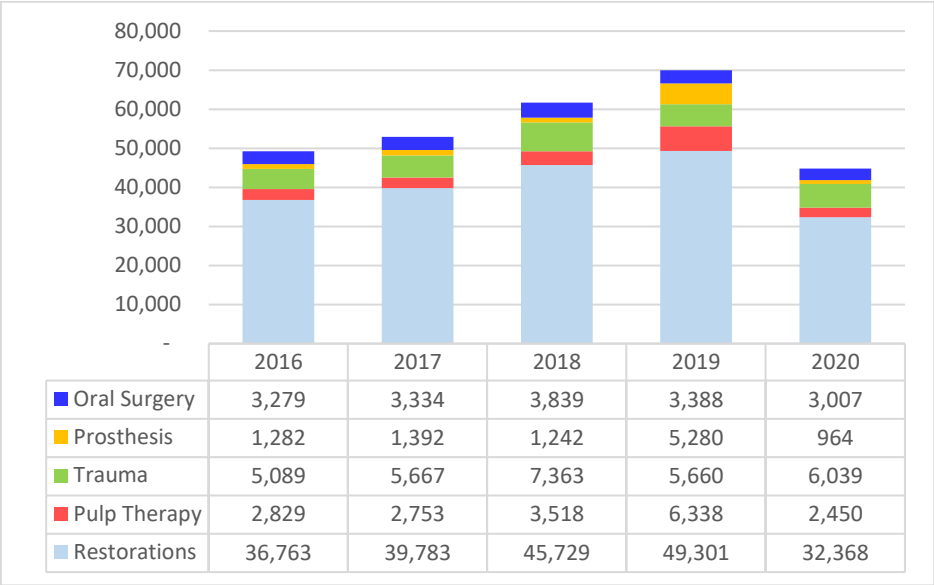
The Paediatric Dental Specialist attends to children below 17 years old. There was a decrease in the number of new patient (39,967) and total attendance (101,162) in 2020 as compared to 2019 due to COVID-19 pandemic **(Figure 19).** Majority of the treatment rendered was restorations followed by trauma, oral surgery, pulp therapy and prosthesis **(Figure 20).**

**Figure 19:**
**Number of Patients Seen by Paediatric Dental Specialist, 2016 to 2020**




*Source: Health Informatics Centre, MOH*

**Figure 20:**
**Treatment Rendered by Paediatric Dental Specialists, 2016 to 2020**

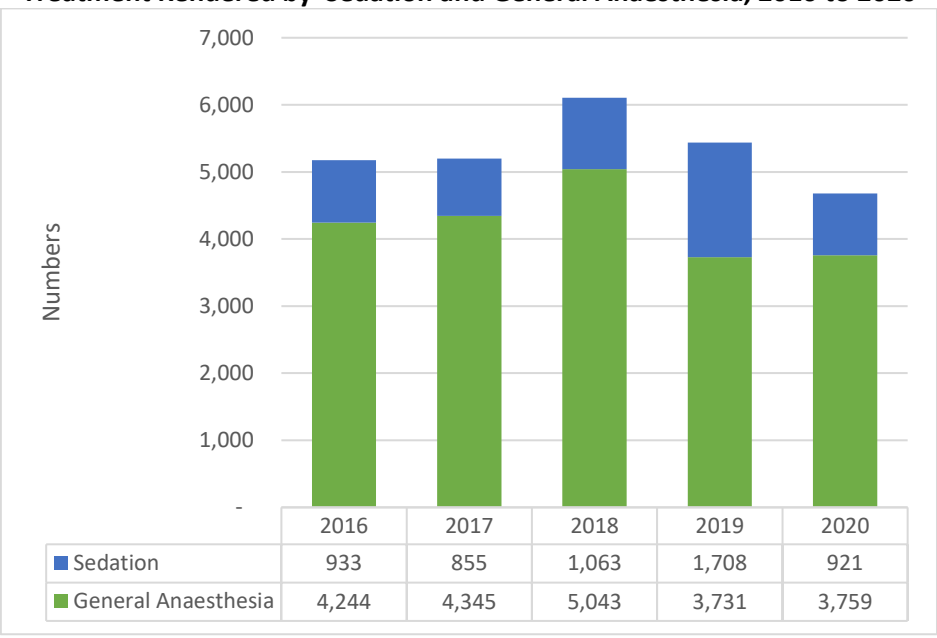



| | 2016 | 2017 | 2018 | 2019 | 2020 |
|---|---|---|---|---|---|
| Oral Surgery | 3,279 | 3,334 | 3,839 | 3,388 | 3,007 |
| Prosthesis | 1,282 | 1,392 | 1,242 | 5,280 | 964 |
| Trauma | 5,089 | 5,667 | 7,363 | 5,660 | 6,039 |
| Pulp Therapy | 2,829 | 2,753 | 3,518 | 6,338 | 2,450 |
| Restorations | 36,763 | 39,783 | 45,729 | 49,301 | 32,368 |

*Source: Health Informatics Centre, MOH*

Treatment done under General Anaesthesia was more than those under sedation **(Figure 21).** The paediatric dental specialist also manages children with special needs. These patients are categorised as those with physical abnormalities, mental retardation, multiple abnormalities and/or those who are medically-compromised. There was an overall decline in special needs cases in 2020 **(Figure 22).**

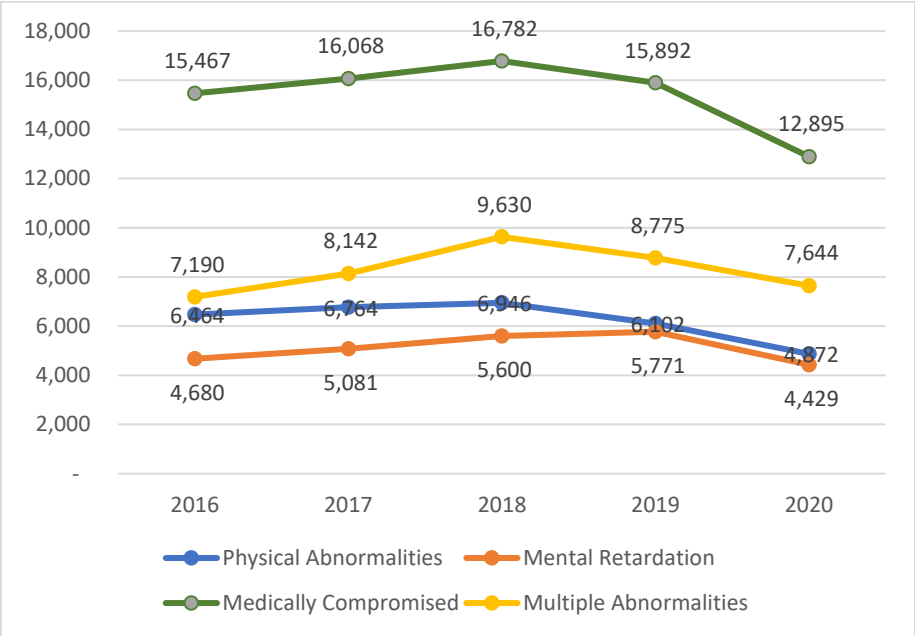
**Figure 21:**
**Treatment Rendered by Sedation and General Anaesthesia, 2016 to 2020**




| | 2016 | 2017 | 2018 | 2019 | 2020 |
|---|---|---|---|---|---|
| Sedation | 933 | 855 | 1,063 | 1,708 | 921 |
| General Anaesthesia | 4,244 | 4,345 | 5,043 | 3,731 | 3,759 |

*Source: Health Informatics Centre, MOH*

**Figure 22:**
**Number of Dental Paediatric Patients Based on Special Needs Conditions, 2016 to 2020**



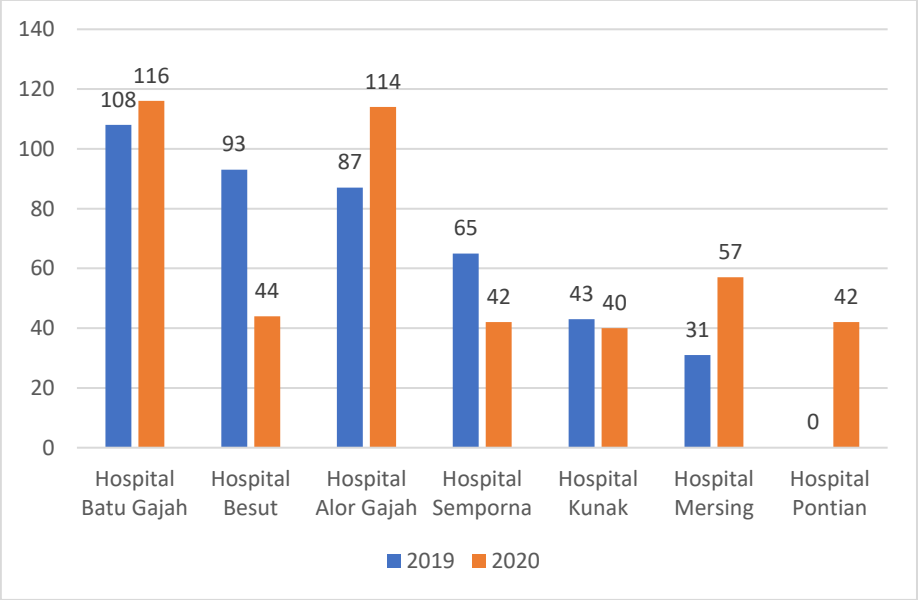

*Source: Health Informatics Centre, MOH*

**Dental Paediatric Cluster Services**

The cluster services programme was piloted in Perak, Melaka, Terengganu and Sabah in 2018 and was fully implemented in 2019 at Perak, Melaka, Terengganu, Johor and Sabah. Batu Gajah, Besut, Alor Gajah, Semporna and Kunak Hospitals were the top five (5) hospitals with the highest attendances.

Despite the COVID-19 pandemic, Batu Gajah, Alor Gajah and Mersing Hospitals recorded higher paediatric patients' attendance in 2020. Additional cluster service was implemented at Pontian Hospital **(Figure 23).**

**Figure 23:**
**Number of Patients Seen at Dental Paediatric Cluster Services, 2019 to 2020**

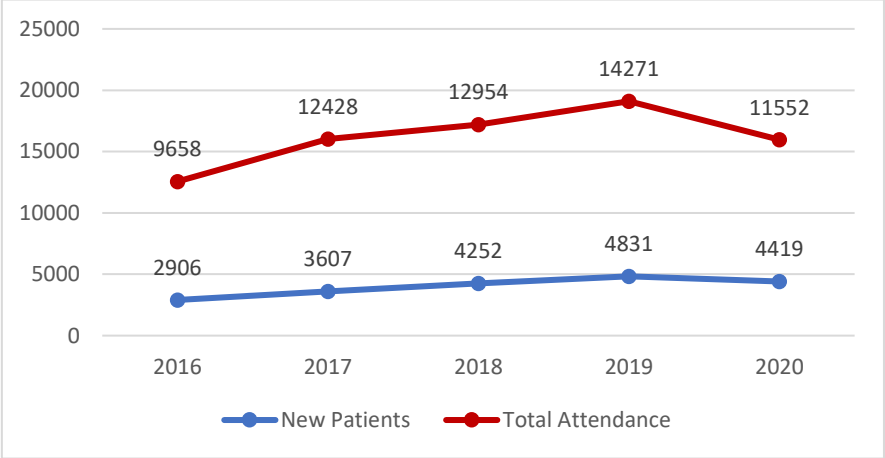



*Source: Health Informatics Centre, MOH*

- **Oral Pathology and Oral Medicine (OPOM)**

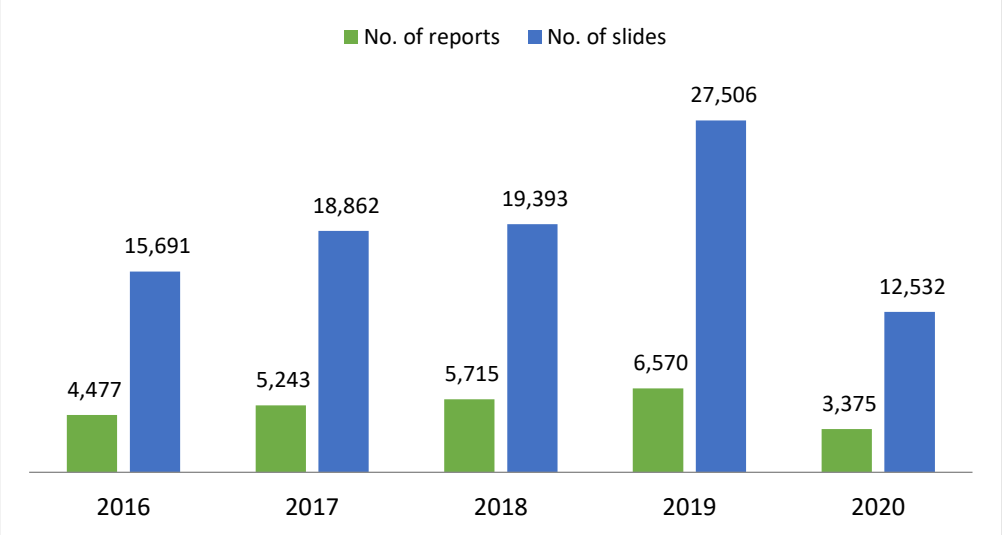
The number of new patient and total attendance seen by OPOM specialists have decreased in 2020 as compared to 2019 **(Figure 24).** Subsequently, the number of reports issued and slides seen by the OPOM specialists have also declined **(Figure 25).**

**Figure 24:**
**New Patients and Total Attendances for OPOM 2016 to 2020**




*Source: Health Informatics Centre, MOH (preliminary data 2020)*

**Figure 25:**
**Number of Reports Issued and Slides Seen by OPOM Specialist, 2016 to 2020**

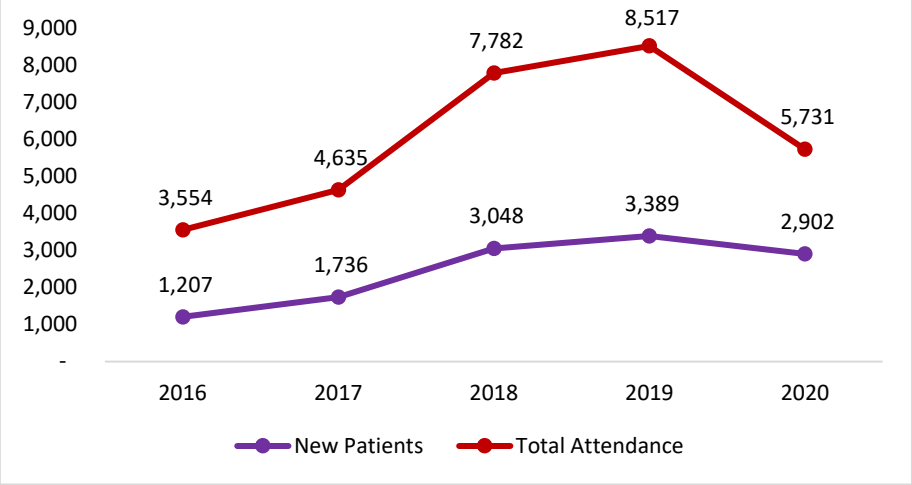



*Source: Oral Health Programme, MOH*

- **Special Care Dentistry (SCD)**

Special Care Dentistry services began in 2011. In 2020, there were seven (7) SCD specialists based in Kuala Lumpur Hospital (HKL), Cheras Rehabilitation Hospital, Kajang Hospital, Seberang Jaya Hospital, Queen Elizabeth Hospital, Raja Perempuan Zainab II Hospital and *Hospital Umum* Sarawak. Number of new patients and total attendance has steadily increased from 2016 until 2019 but decreased in 2020 (**Figure 26).**

**Figure 26:**
**New Patients and Total Attendance for Special Needs Dentistry Specialty, 2016 to 2020**

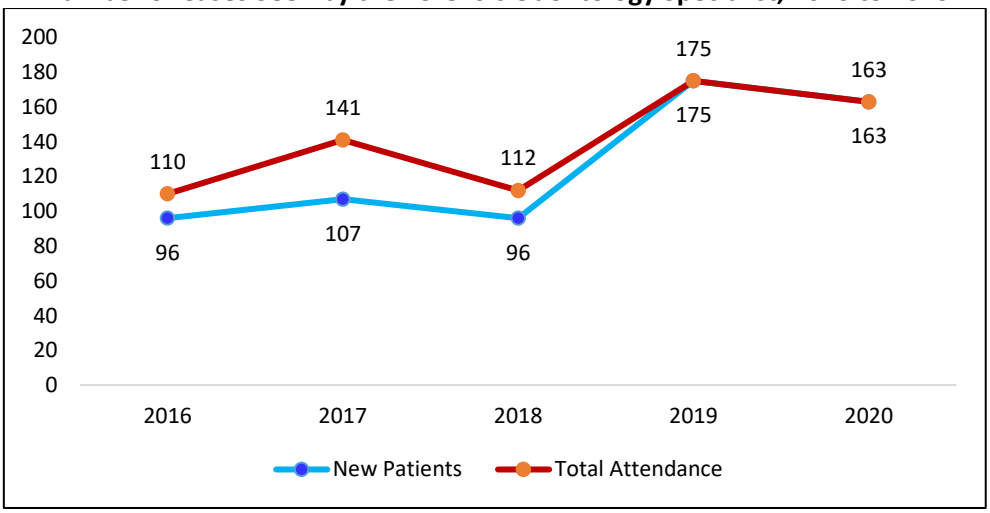



*Source: Oral Health Programme, MoH*

- **Forensic Odontology**

Forensic Odontology Unit was established in Kuala Lumpur Hospital (HKL) and this unit works closely with the General Forensic Department. In 2020, there were two (2) Forensic Odontology specialists positioned in HKL and one (1) in Pulau Pinang Hospital to manage forensic cases throughout the country. Dental forensic cases included internal and external referred cases from HKL, as well as from Disaster Victim Investigation (DVI) cases. In 2020 , there was a slower rate of interstates referrals due to restriction imposed during MCO, but referral for One Stop Crisis Centre (OSCC) cases increased slightly in HKL due to the same reason. **Figure 27** shows the increasing trends in number of cases seen by Forensic Odontology Specialist for the last five (5) years; nevertheless there was a slight decrease in 2020.

**Figure 27:**
**Number of Cases Seen by the Forensic Odontology Specialist, 2016 to 2020**



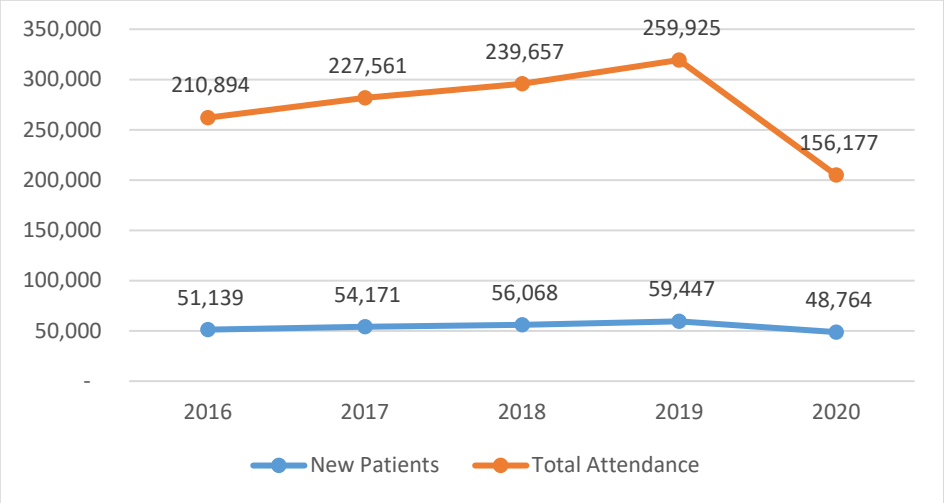

*Source: Oral Health Programme, MOH*

## Non-Hospital Based Dental Specialties

- **Orthodontics**

The demand for orthodontics treatment has always been on the rise. However, total attendance has decreased by 39.9 percent in 2020 as compared to 2019 **(Figure 28) .**

**Figure 28:**
**New Patients and Total Attendance for Orthodontic Specialty, 2016 to 2020**




*Source: Health Informatics Centre, MOH*

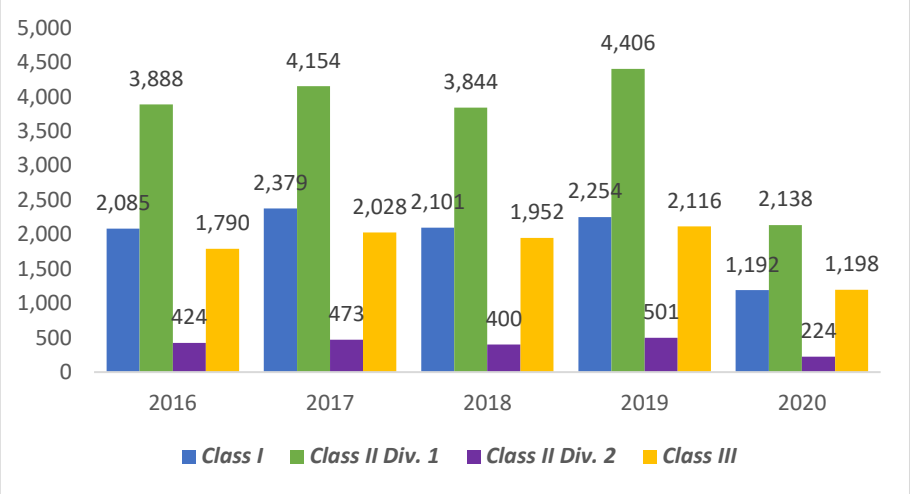
In 2020, there was a decline in patients who received removable dan fixed appliances. The number of patients who completed active treatment decreased by 45.4 percent in 2020 (3,549) as compared to 2019 (6,501) (**Table 54).** The majority of cases seen were malocclusion Class II Div. 1, followed by malocclusion Class III, Class I and Class II Div. 2 **(Figure 29).**

**Table 54:**
**Type of Services for Orthodontic Cases, 2016 to 2020**

| Services Categories | | 2016 | 2017 | 2018 | 2019 | 2020 |
|---|---|---|---|---|---|---|
| Consultation | I | 13643 | 13503 | 13077 | 13753 | 7498 |
| | II | 8207 | 9034 | 8297 | 9277 | 4955 |
| Removable Appliances | No. of Patients | 7159 | 7844 | 8024 | 9084 | 5287 |
| Fixed Appliances | No. of Patients | 9666 | 10333 | 9684 | 10418 | 5846 |
| No. of active treatment cases | | 31389 | 34868 | 35213 | 37186 | 33914 |
| Active treatment completed | | 4665 | 5267 | 5293 | 6501 | 3549 |

*Source: Health Informatics Centre, MOH*

**Figure 29:**
**Types of Malocclusions seen among Orthodontic Patients, 2016 to 2020**




*Source: Health Informatics Centre, MOH*

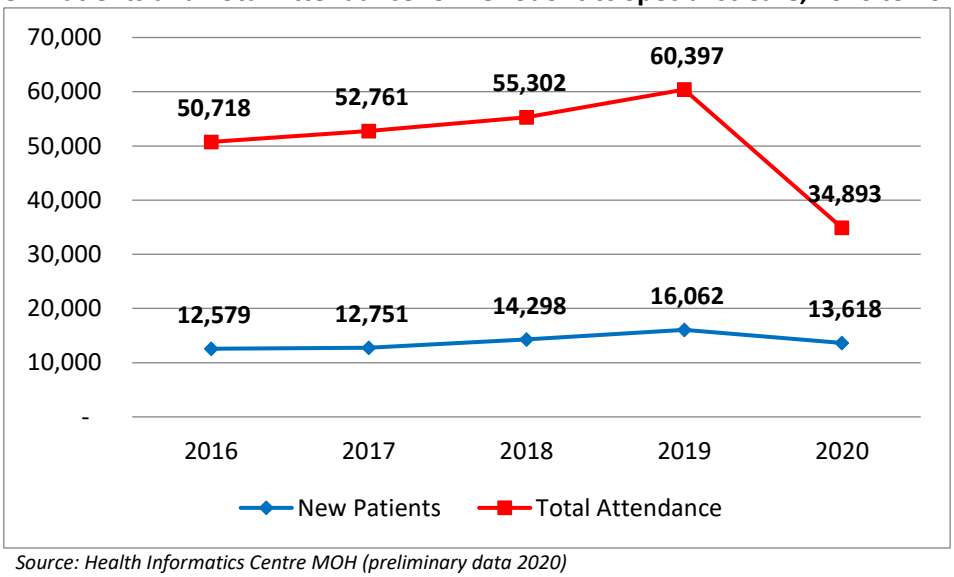
**Orthodontic Cluster Services**

Orthodontic cluster services was piloted and implemented in 2019 at Beaufort dental clinic, Sabah. The attendance decreased in 2020 (43) as compared to 2019 (146) due to the COVID-19 pandemic.

- **Periodontics**

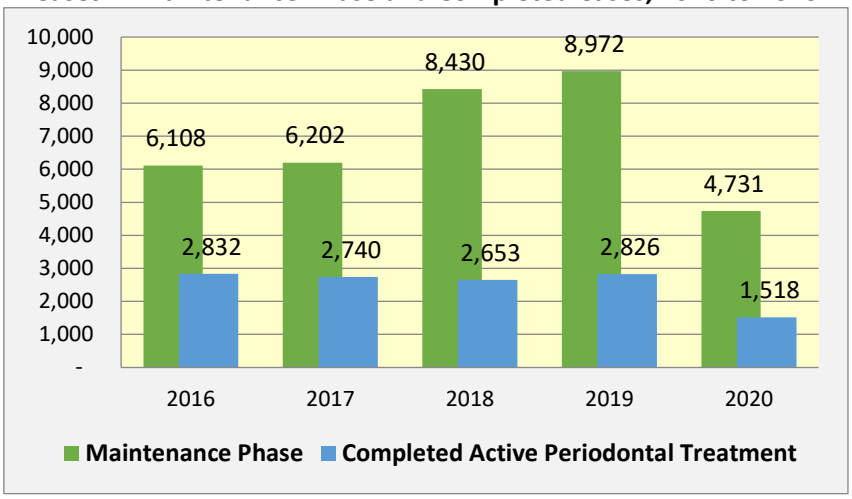
In 2020, the number of new patients (13,618) and total attendance (34,893) of Periodontic patients decreased by 15.2 percent and 42.2 percent as compared to 2019 respectively **(Figure 30).** The number of patients in Maintenance Phase and completed Active Periodontal Treatment decreased by 47.3 percent and 46.3 percent respectively as compared to 2019 (**Figure 31**).

**Figure 30:**
**New Patients and Total Attendance for Periodontics Specialist Care, 2016 to 2020**




*Source: Health Informatics Centre MOH (preliminary data 2020)*

**Figure 31:**
**Cases in Maintenance Phase and Completed Cases, 2016 to 2020**

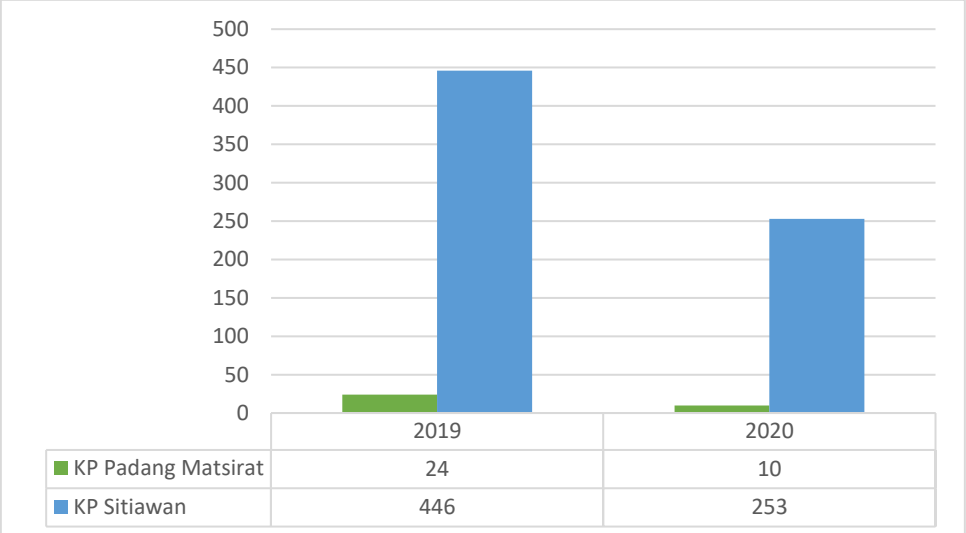



*Source: Health Informatics Centre MOH (preliminary data 2020)*

**Periodontic Cluster Services**

Periodontic cluster services was piloted and implemented in 2019 at Padang Matsirat and Sitiawan dental clinic, Perak. The total attendances decreased in 2020 due to the COVID-19 pandemic **(Figure 32).**

**Figure 32:**
**Total Number of Attendance from Periodontic Cluster Service, 2019 and 2020**

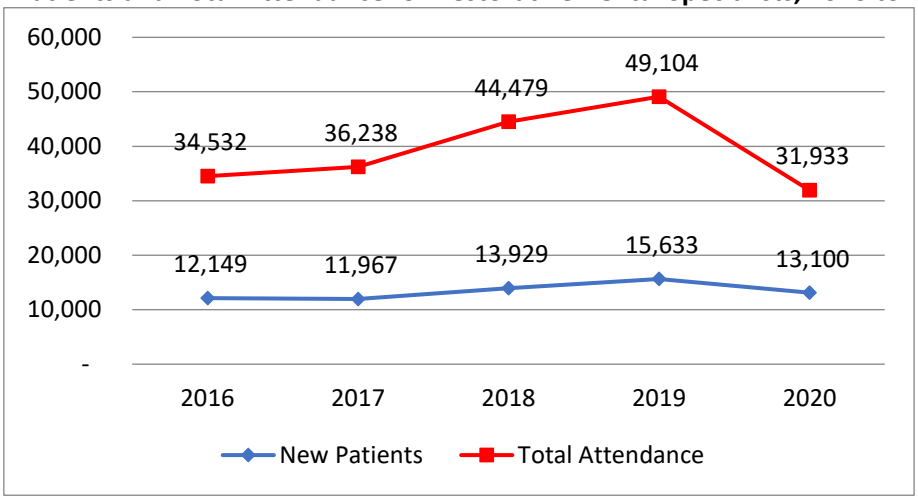



*Source: Health Informatics Centre, MOH*

- **Restorative Dentistry**

The total attendances in Restorative Dentistry Specialist Clinics decreased to 35.9 percent in 2020 (31,933) as compared to 2019 (49,104**) (Figure 33).** The highest attendance was among those in the age group of 30 to 59 years old **(Table 55).** Endodontics contributed the highest number of cases relative to crowns and bridges. Total number of cases for endodontics, crowns and bridges cases also decreased as compared to 2019 **(Figure 34).**

**Figure 33:**
**New Patients and Total Attendance for Restorative Dental Specialists, 2016 to 2020**



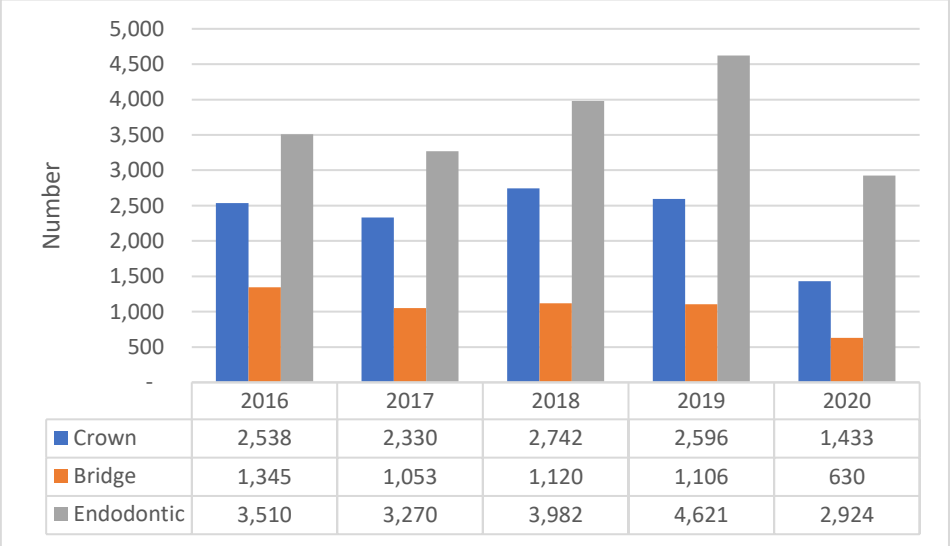

*Source: Health Informatics Centre MOH, 2020*

**Table 55:**
**New Patients and Total Attendance for Restorative Dentistry by Age Group, 2016 to 2020**

| Age Group (Years) | New Patients | | | | | Total Attendance | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | 2016 | 2017 | 2018 | 2019 | 2020 | 2016 | 2017 | 2018 | 2019 | 2020 |
| 7-12 | 73 | 112 | 175 | 195 | 127 | 123 | 158 | 288 | 310 | 211 |
| 13-17 | 686 | 755 | 879 | 1,107 | 714 | 1,474 | 1,714 | 2,162 | 2,469 | 1,460 |
| 18-29 | 2,553 | 2,462 | 3,018 | 3,297 | 2,759 | 6,478 | 6,407 | 8,274 | 8,871 | 5,760 |
| 30-59 | 6,651 | 6,456 | 7,340 | 7,996 | 6,831 | 19,449 | 20,149 | 23,736 | 26,004 | 16,527 |
| ≥60 | 2,186 | 2,182 | 2,517 | 3,035 | 2,669 | 7,008 | 7,810 | 10,019 | 11,447 | 7,975 |
| **TOTAL** | **12,149** | **11,967** | **13,929** | **15,630** | **13,100** | **34,532** | **36,238** | **44,479** | **49,101** | **31,933** |

*Source: Health Informatics Centre, MOH*

**Figure 34:**
**Type of Restorative Dentistry Cases, 2016 to 2020**




*Source: Health Informatics Centre MOH*

- **Dental Public Health (DPH)**

The DPH Specialist takes on the administration of the whole Oral Health MOH programme, from management of activities, managing issues of human resource and funding, regulation and enforcement, clinical affairs, research and epidemiology, inter-sectoral collaboration as well as managing challenges that face the dental profession, within and outside of the country.

The DPH Specialist also plays a pivotal role in decision making through the Malaysian Dental Council and matters pertaining to professional associations. Hence, this whole Annual Report covers almost all activities undertaken under the role and function of the DPHS.

## COMMUNITY ORAL HEALTHCARE

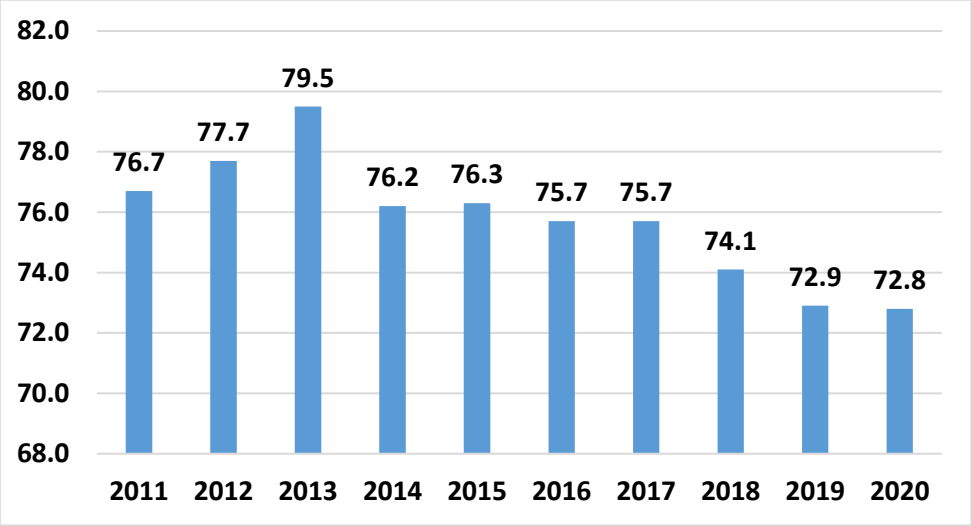
### Fluoridation of Public Water Supply

- **Population Coverage**

The fluoridation of public water supplies is a safe, effective, economical¸ practical and socially equitable public health measure for prevention and control of dental caries for people of all age groups, ethnicity, income and educational levels. However, the coverage and maintenance of optimum levels of fluoride at water treatment plants and reticulation points still remain a challenge for some states, in particular, Sabah, Sarawak, Kelantan and Pahang.

The trend on the estimated population receiving fluoridated water was generally on the increase from 2011 to 2013. However, there was a decrease trend for population coverage in 2014 (from 79.5 percent to 76.2 percent), 2016 (from 76.3 percent to 75.7 percent), 2018 (from 75.7 percent to 74.1 percent) and in 2020 (from 72.9 percent to 72.8 percent) **(Figure 35)**. The drop was due to a decline in coverage for Pahang as a result of cessation of water fluoridation in majority of the water treatment plants in the state. The water authority in Pahang was corporatized in 2012. Since then, due to financial constraints, there has been no purchase of fluoride compounds.

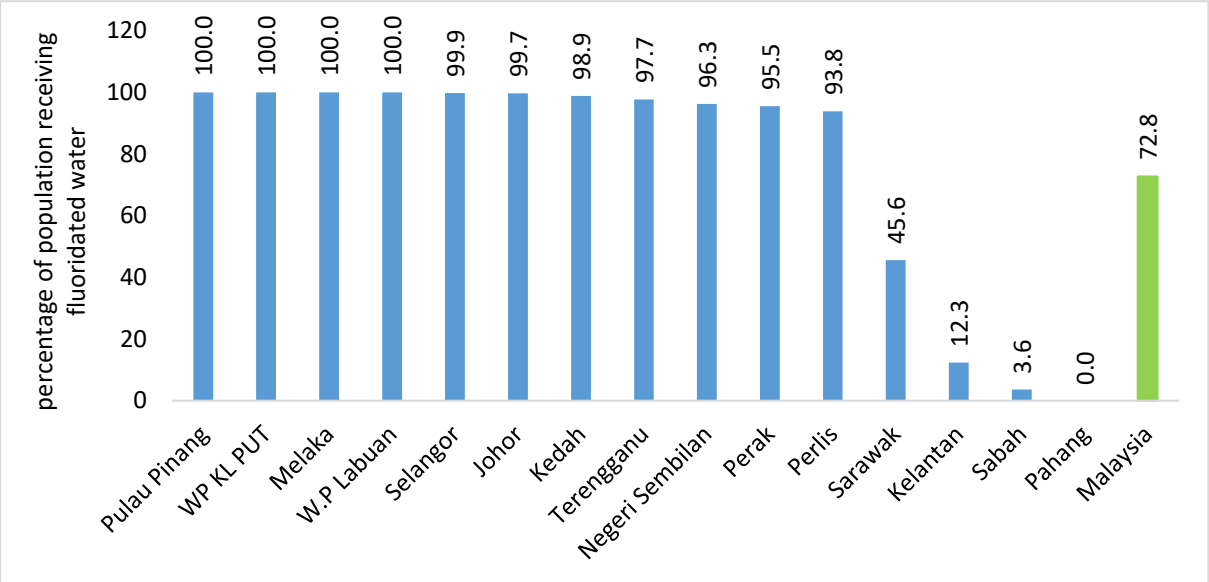
**Figure 35:**
**Percentage of Population Coverage for Water Fluoridation Programme, 2011 to 2020**




*Source: Oral Health Programme, MOH*

Three (3) states achieved less than 15 percent population coverage of fluoridated water – Kelantan, Sabah and Pahang, with Pahang being the lowest at 0.0 percent **(Figure 36)**. Kelantan and Sabah achieved a population coverage of 12.3 percent and 3.6 percent respectively.

**Figure 36:**
**Percentage of Population Receiving Fluoridated Water by State, 2020**




*Source: Oral Health Programme, MOH*

The Sabah State Cabinet Committee approved the re-activation of water fluoridation programme on 6 October 2010. However, the implementation of the programme remains a continuing challenge due to funding and technical issues in the state, rendering Sabah with the second lowest population coverage of 3.6 percent**.**

- **Water Treatment Plants (WTP)**

In 2020, there were 497 Water Treatment Plants (WTPs) in Malaysia **(Table 56).** Slightly more than half (288) have been privatised.

**Table 56:**
**Water Treatment Plant by Sector, 2020**

| State | Goverment | Water Supply Board | Private | Total WTP |
|---|---|---|---|---|
| Perlis | 0 | 0 | 3 | 3 |
| Kedah | 0 | 0 | 37 | 37 |
| Penang | 0 | 0 | 8 | 8 |
| Perak | 0 | 38 | 5 | 43 |
| Selangor | 0 | 0 | 30 | 30 |
| FT KL & Putrajaya | 0 | 0 | 3 | 3 |
| Negeri Sembilan | 0 | 0 | 22 | 22 |
| Melaka | 0 | 9 | 0 | 9 |
| Johor | 0 | 0 | 46 | 46 |
| Pahang | 0 | 0 | 68 | 68 |
| Terengganu | 0 | 0 | 12 | 12 |
| Kelantan | 0 | 0 | 35 | 35 |
| Sabah | 70 | 0 | 14 | 84 |
| FT Labuan | 4 | 0 | 1 | 5 |
| Sarawak | 77 | 11 | 4 | 92 |
| **MALAYSIA** | **151 (30.4 percent)** | **58 (11.7 percent)** | **288 (57.9 percent)** | **497** |

*Source: Oral Health Programme, MOH*

A total of 316 (63.6 percent) WTPs have had fluoride feeders installed **(Table 57)**. Among those with feeders, 239 (75.6 percent) were active while 77 (24.4 percent) were inactive due to lack of resources to purchase fluoride compound or technical problems such as fluoride feeders that require repairs or replacement. In 2020, all WTPs in Perlis, Penang, Selangor, Federal Territory Kuala Lumpur/Putrajaya, Melaka and Terengganu produced fluoridated water. However, less than 50 percent of water treatment plants in Sarawak, Federal Territory Labuan (FT Labuan), Kelantan, Sabah and Pahang produce fluoridated water.

**Table 57:**
**WTP with Fluoride Feeders by State, 2020**

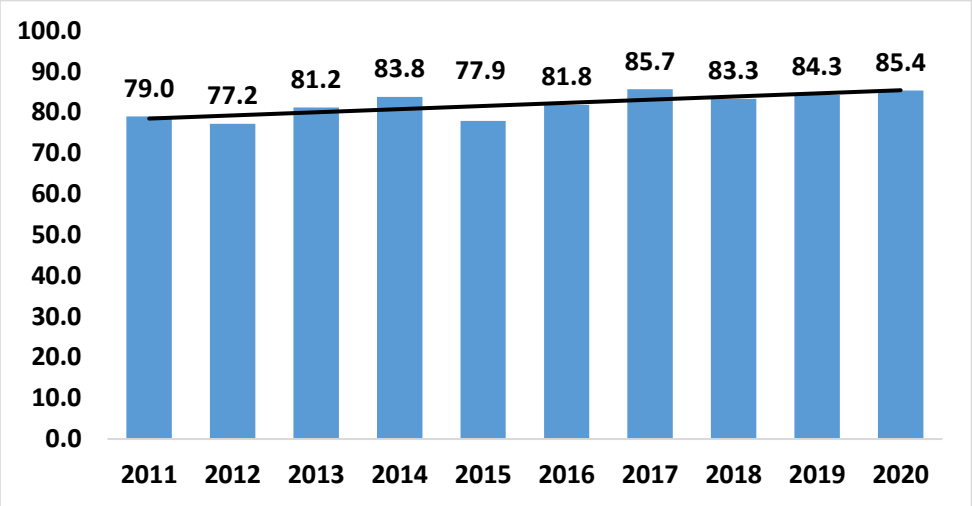
| State | No. of WTP | WTP with fluoride feeder | | WTP with active fluoride feeder | | WTP producing fluoridated water |
|---|---|---|---|---|---|---|
| | | Total | Percentage | Total | Percentage | Percentage |
| Perlis | 3 | 3 | 100.0 | 3 | 100.0 | 100.0 |
| Kedah | 37 | 35 | 94.6 | 35 | 100.0 | 94.6 |
| Penang | 8 | 8 | 100.0 | 8 | 100.0 | 100.0 |
| Perak | 43 | 42 | 97.7 | 40 | 95.2 | 93.0 |
| Selangor | 30 | 30 | 100.0 | 30 | 100.0 | 100.0 |
| FT KL & Putrajaya | 3 | 3 | 100.0 | 3 | 100.0 | 100.0 |
| Negeri Sembilan | 22 | 20 | 90.9 | 20 | 100.0 | 90.9 |
| Melaka | 9 | 9 | 100.0 | 9 | 100.0 | 100.0 |
| Johor | 46 | 46 | 100.0 | 46 | 100.0 | 100.0 |
| Pahang | 68 | 48 | 70.6 | 0 | 0.0 | 0.0 |
| Terengganu | 12 | 12 | 100.0 | 12 | 100.0 | 100.0 |
| Kelantan | 35 | 5 | 14.3 | 1 | 20.0 | 2.9 |
| Sabah | 84 | 11 | 13.1 | 10 | 90.9 | 11.9 |
| FT Labuan | 5 | 4 | 80.0 | 1 | 25.0 | 20.0 |
| Sarawak | 92 | 40 | 43.5 | 21 | 52.5 | 22.8 |
| **MALAYSIA** | **497** | **316** | **63.6** | **239** | **75.6** | **48.1** |

*Source: Oral Health Programme, MOH*

- **Maintaining Fluoride Levels in Public Water Supply**

Maintenance of fluoride levels within the recommended range of 0.4 – 0.6 ppm is important to achieve maximum benefit for control and prevention of dental caries while ensuring health and safety. In general, there is an upward trend in conformance of readings to the recommended range for the years 2011 to 2020 **(Figure 37)**. In 2020, 85.4 percent of readings at reticulation points conformed to the recommended range.

**Figure 37:**
**Percentage of Conformance of Fluoride Level in Public Water Supplies to the Recommended Range (0.4-0.6ppm), 2011 to 2020**




*Source: Oral Health Programme, MOH*

Nine (9) out of 15 states, namely Kedah, Penang, Perak, Selangor, FT Kuala Lumpur/Putrajaya, Negeri Sembilan, Melaka, Johor and FT Labuan, complied with the National Indicator Approach (NIA) standards for the lower limit (not more than 25 percent of the readings below 0.4 ppm) and the upper limit (not more than 7 percent of readings exceeding 0.6 ppm) of fluoride level in public water supplies **(Table 58)**.

**Table 58**:
**Fluoride Level at Reticulation Points by State, 2020**

| State | Reticulation Points | | | | | | |
|---|---|---|---|---|---|---|---|
| | Total Readings (n) | Fluoride Level | | | | | |
| | | 0.4-0.6 ppm | | < 0.4 ppm | | > 0.6 ppm | |
| | | n | percentage | n | percentage | n | percentage |
| Perlis | 117 | 36 | 30.8 | 81 | 69.2 | 0 | 0.0 |
| Kedah | 782 | 765 | 97.8 | 10 | 1.3 | 7 | 0.9 |
| Penang | 384 | 384 | 100.0 | 0 | 0.0 | 0 | 0.0 |
| Perak | 923 | 871 | 94.4 | 44 | 4.8 | 8 | 0.9 |
| Selangor | 1,278 | 1,277 | 99.9 | 0 | 0.0 | 1 | 0.1 |
| FT KL & Putrajaya | 125 | 125 | 100.0 | 0 | 0.0 | 0 | 0.0 |
| Negeri Sembilan | 466 | 464 | 99.6 | 2 | 0.4 | 0 | 0.0 |
| Melaka | 398 | 398 | 100.0 | 0 | 0.0 | 0 | 0.0 |
| Johor | 2,202 | 2,194 | 99.6 | 6 | 0.3 | 2 | 0.1 |
| Pahang | 232 | 10 | 4.3 | 222 | 95.7 | 0 | 0.0 |
| Terengganu | 468 | 317 | 67.7 | 141 | 30.1 | 10 | 2.1 |
| Kelantan | 71 | 3 | 4.2 | 67 | 94.4 | 1 | 1.4 |
| Sabah | 385 | 256 | 66.5 | 123 | 32.0 | 6 | 1.6 |
| FT Labuan | 67 | 60 | 89.6 | 7 | 10.5 | 0 | 0.0 |
| Sarawak | 583 | 81 | 13.9 | 499 | 85.6 | 3 | 0.5 |
| **MALAYSIA** | **8,481** | **7,241** | **85.4** | **1,202** | **14.2** | **38** | **0.5** |

*Source: Oral Health Programme (Quality Assurance Programme), MOH*

Six (6) states did not comply with the standard for the lower limit (not more than 25 percent of the readings below 0.4 ppm) of fluoride level, highest in Pahang with 95.7 percent non-compliance of reticulation readings.

- **Annual Operating Budget for the Fluoridation Programme**

Government funds only the government-operated WTPs. In 2020, a total of RM2,422,147.00 was allocated to fund this programme in three (3) states i.e WTP in Perak, Sabah and Sarawak **(Table 59).** These three states had spent about 94 percent of the allocations.

**Table 59:**
**Government Funded Fluoridation Programme by State, 2020**

| State | *Anggaran Belanja Mengurus* | | *Program Khusus* | | Total Allocation (RM) | Total Expenditure (RM) |
|---|---|---|---|---|---|---|
| | Allocation (RM) | Expenditure (RM) | Allocation (RM) | Expenditure (RM) | | |
| **Perak** | 26,547.00 | 26,547.00 | 1,240,000.00 | 1,239,999.35 | 1,266,547.00 | 1,266,546.35 |
| **Sabah** | 0.00 | 0.00 | 270,460.00 | 270,422.00 | 270,460.00 | 270,422.00 |
| **Sarawak** | 0.00 | 0.00 | 885,140.00 | 740,425.00 | 885,140.00 | 740,425.00 |
| **TOTAL** | **26,547.00** | **26,547.00** | **2,395,600.00** | **2,250,846.35** | **2,422,147.00** | **2,277,393.35** |

*Source: Oral Health Programme, MOH*

- **Interagency Collaboration for Water Fluoridation**

The Oral Health Programme continues to collaborate with various agencies to strengthen and expand community water fluoridation in the country. Visits to WTPs and meetings were conducted with relevant agencies at national and state level in 2020. Various implementation issues were discussed and these included fluoride levels in public water supplies, conformance of fluoride levels to the recommended range, and the supply and storage of fluoride compounds.

- **Training and Public Awareness**

Recognizing that knowledge and understanding about the benefits of water fluoridation is crucial, training is conducted each year for the health personnel as well as personnel from WTPs. Nationwide, 89 training sessions were conducted in 2020, including hands-on training on the use of colorimeters.

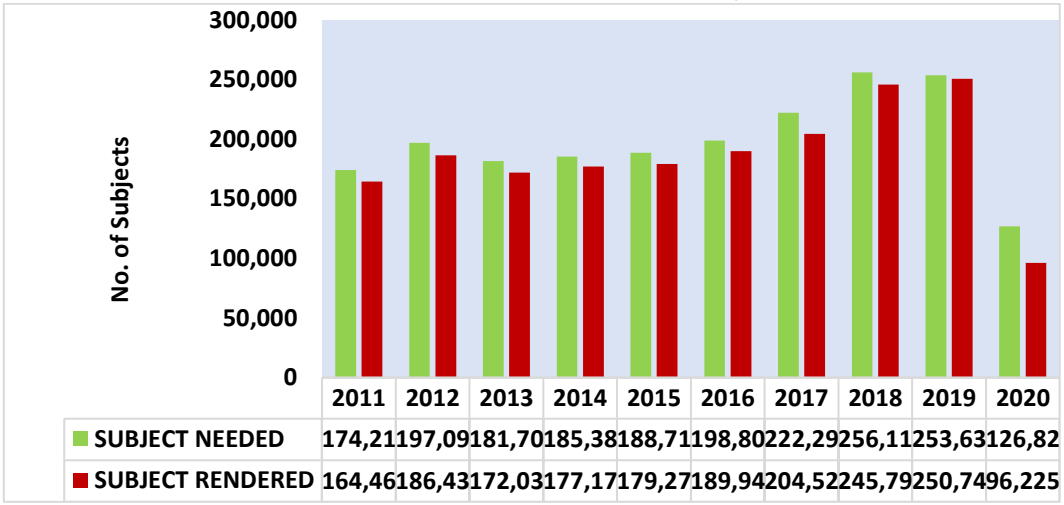
## Clinical Prevention For Caries

Clinical prevention for caries consists of School-based Fissure Sealant Programme, Fluoride Varnish for Toddlers Programme and Fluoride Mouth Rinsing Programme. Overall, decreasing pattern was observed for School-based Fissure Sealant Programme and Fluoride Mouth Rinsing Programme in 2020 due to closure of schools during COVID-19 pandemic. In addition, Fluoride Varnish for Toddlers Programme was also affected as there was less attendance of toddlers at designated premise (MCH Clinic and kindergarten).

- **Fissure Sealant Programme**

A school-based fissure sealant programme started in 1999, is part of a comprehensive approach to caries prevention which focuses on primary schoolchildren. A sealant is a professionally applied material to occlude the pits and fissures on occlusal, buccal and lingual surfaces of posterior teeth to prevent caries initiation and to arrest caries progression by providing a physical barrier that inhibits microorganisms and food particles from collecting in pits and fissures. In 2020, 75.9 percent of schoolchildren needing fissure sealants were rendered fissure sealants under the School-based Fissure Sealant Programme **(Figure 38).** Overall, there is an increasing trend of subjects and teeth provided with fissure sealants from 2011 to 2019. However, decreasing pattern was observed in 2020 **(Figure 39).**

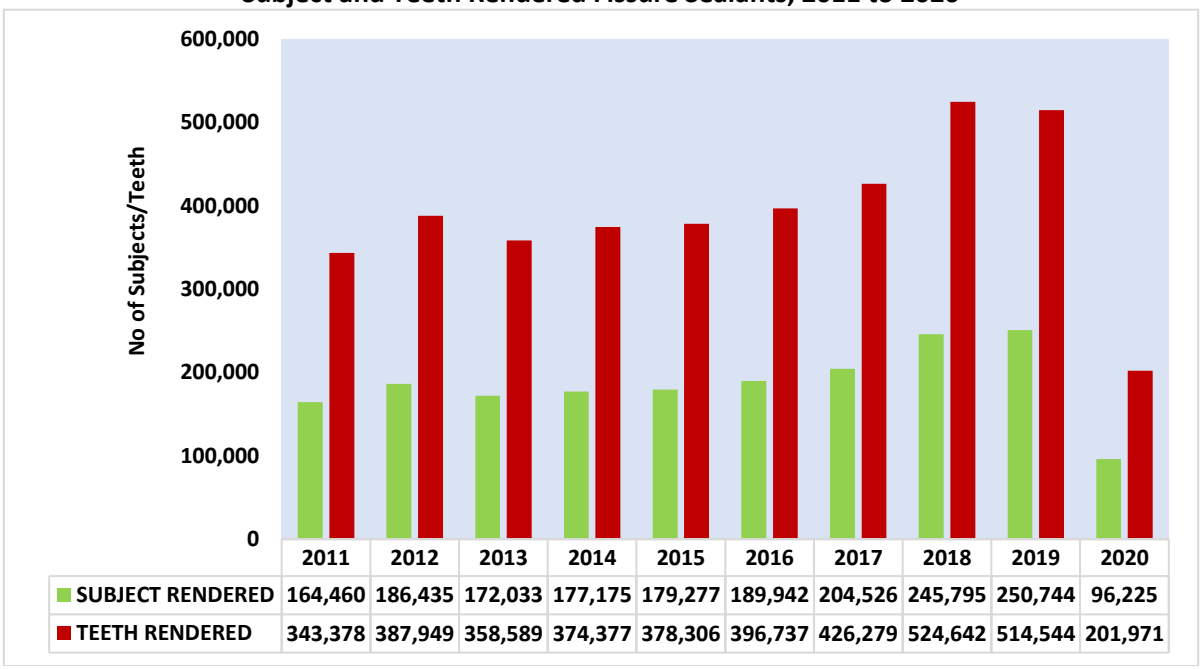
**Figure 38:**
**Treatment Need and Fissure Sealants Rendered, 2011 to 2020**




| | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 |
|---|---|---|---|---|---|---|---|---|---|---|
| SUBJECT NEEDED | 174,21 | 197,09 | 181,70 | 185,38 | 188,71 | 198,80 | 222,29 | 256,11 | 253,63 | 126,82 |
| SUBJECT RENDERED | 164,46 | 186,43 | 172,03 | 177,17 | 179,27 | 189,94 | 204,52 | 245,79 | 250,74 | 96,225 |

*Source: Oral Health Programme, MOH*

**Figure 39:**
**Subject and Teeth Rendered Fissure Sealants, 2011 to 2020**

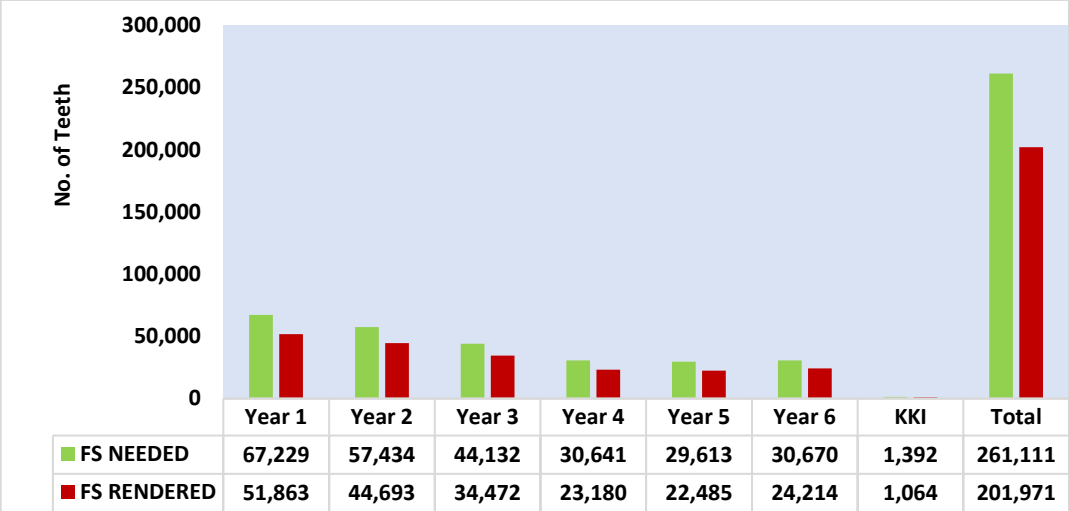



| | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 |
|---|---|---|---|---|---|---|---|---|---|---|
| SUBJECT RENDERED | 164,460 | 186,435 | 172,033 | 177,175 | 179,277 | 189,942 | 204,526 | 245,795 | 250,744 | 96,225 |
| TEETH RENDERED | 343,378 | 387,949 | 358,589 | 374,377 | 378,306 | 396,737 | 426,279 | 524,642 | 514,544 | 201,971 |

*Source: Oral Health Programme, MOH*

A total number of 261,111 teeth examined required fissure sealants. Of these, 77.4 percent were fissure-sealed **(Figure 40).**

**Figure 40:**
**Teeth Needed and Rendered Fissure Sealants among Year 1 to Year 6 Primary Schoolchildren, 2020**




| | Year 1 | Year 2 | Year 3 | Year 4 | Year 5 | Year 6 | KKI | Total |
|---|---|---|---|---|---|---|---|---|
| FS NEEDED | 67,229 | 57,434 | 44,132 | 30,641 | 29,613 | 30,670 | 1,392 | 261,111 |
| FS RENDERED | 51,863 | 44,693 | 34,472 | 23,180 | 22,485 | 24,214 | 1,064 | 201,971 |

*Source: Oral Health Programme, MOH*

Over the last 10 years, the percentage of children in need of fissure sealant and those rendered fissure sealant have increased from 94.4 percent in year 2011 to 99.8 percent in 2019. The percentage of teeth in need of fissure sealant and rendered fissure sealant had increased from 95.4 percent in 2016 to 98.9 percent in 2019. Decreased pattern seen in 2020, 75.9 percent and 77.4 percent respectively **(Table 60),** thus it did not achieve the target set, i.e. 95 percent of schoolchildren needing fissure sealants, received fissure sealants. Provision of fissure sealants by states is shown in **Table 61**.

**Table 60:**
**Provision of Fissure Sealants, 2016 to 2020**

| Year | No. of Children | | | No. of Teeth | | |
|---|---|---|---|---|---|---|
| | Needed FS | Rendered FS | | Needed FS | Rendered FS | |
| | n | n | % | n | n | % |
| 2016 | 198,805 | 189,942 | 95.5 | 415,933 | 396,737 | 95.4 |
| 2017 | 222,291 | 204,526 | 92.0 | 470,692 | 426,279 | 90.6 |
| 2018 | 256,116 | 245,795 | 96.0 | 549,302 | 524,642 | 95.5 |
| 2019 | 253,631 | 250,744 | 98.8 | 520,397 | 514,544 | 98.9 |
| 2020 | 126,823 | 96,225 | 75.9 | 261,111 | 201,971 | 77.4 |

*Source: Oral Health Programme, MOH*

**Table 61:**
**Provision of Fissure Sealants by States, 2020**

| State | No. of Children | | | No. of Teeth | | |
|---|---|---|---|---|---|---|
| | Needed FS | Rendered FS | | Needed FS | Rendered FS | |
| | n | n | % | n | n | % |
| Perlis | 1,524 | 1,109 | 72.8 | 5,256 | 1,887 | 74.7 |
| Kedah | 3,248 | 2,731 | 84.1 | 6,129 | 5,205 | 84.9 |
| Penang | 2,480 | 1,502 | 60.6 | 4,226 | 2,684 | 63.5 |
| Perak | 6,389 | 4,966 | 77.7 | 10,846 | 8,556 | 78.9 |

| State | No. of Children | | | No. of Teeth | | |
|---|---|---|---|---|---|---|
| | Needed FS | Rendered FS | | Needed FS | Rendered FS | |
| | n | n | % | n | n | % |
| Selangor | 4,120 | 2,818 | 68.4 | 6,279 | 4,426 | 70.5 |
| FT KL & Putrajaya | 1,736 | 869 | 50.1 | 2,404 | 1,225 | 51.0 |
| N. Sembilan | 2,102 | 1,805 | 85.9 | 3,806 | 3,274 | 86.0 |
| Melaka | 7,468 | 6,535 | 87.5 | 14,772 | 12,951 | 87.7 |
| Johor | 3,864 | 3,403 | 88.1 | 7,114 | 6,368 | 89.5 |
| Pahang | 13,970 | 12,097 | 86.6 | 29,771 | 26,586 | 89.3 |
| Terengganu | 8,567 | 5,257 | 61.4 | 16,058 | 9,681 | 60.3 |
| Kelantan | 25,003 | 22,013 | 88.0 | 57,750 | 51,730 | 89.6 |
| ILKKM | 476 | 244 | 51.3 | 977 | 484 | 49.5 |
| **Pen. Malaysia** | **80,947** | **65,349** | **80.7** | **162,658** | **135,057** | **83.0** |
| Sabah | 28,101 | 19,308 | 68.7 | 68,568 | 48,122 | 70.2 |
| Sarawak | 17,105 | 11,128 | 65.1 | 28,908 | 18,170 | 62.9 |
| FT Labuan | 670 | 440 | 65.7 | 977 | 622 | 63.7 |
| **MALAYSIA** | **126,823** | **96,225** | **75.9** | **261,111** | **201,971** | **77.4** |

*Source: Oral Health Programme, MOH*

The trend of teeth caries experience among year 6 schoolchildren from 2011 until 2020 was also captured in the report. The 10 years data showed that majority of caries experience involved posterior teeth and in 2020, 61 percent of the incidence involved only the occlusal surface of the posterior teeth **(Table 62)**.

**Table 62:**
**Trend Data of Decayed Teeth among Year 6 Schoolchildren, 2011 to 2020**

| Year | No. of Teeth with Caries Experience (* D + F) | No. of Posterior Teeth with Occlusal Caries Experience (*D + F) | | | | No. of Teeth with Anterior Caries Experience (*D + F) | |
|---|---|---|---|---|---|---|---|
| | | All type (** Class I and II) | | Class I only | | | |
| | N | n1 | % | n2 | % | N-n1 | % |
| 2011 | 409,162 | 291,587 | 71.3 | 262,771 | 64.2 | 117,575 | 28.7 |
| 2012 | 441,440 | 297,460 | 67.4 | 284,107 | 64.4 | 143,980 | 32.6 |
| 2013 | 409,858 | 293,282 | 71.6 | 265,716 | 64.8 | 116,576 | 28.4 |
| 2014 | 362,116 | 265,286 | 73.3 | 234,934 | 64.8 | 96,830 | 26.7 |
| 2015 | 341,614 | 245,580 | 71.9 | 217,622 | 63.7 | 96,034 | 28.1 |
| 2016 | 326,614 | 238,989 | 73.2 | 216,141 | 66.2 | 87,625 | 26.8 |
| 2017 | 303,320 | 221,302 | 73.0 | 197,512 | 65.1 | 82,018 | 27.0 |
| 2018 | 286,324 | 213,979 | 74.7 | 194,234 | 67.8 | 72,345 | 25.3 |
| 2019 | 277,833 | 209,934 | 75.6 | 189,683 | 68.3 | 67,899 | 24.4 |
| 2020 | 150,128 | 101,963 | 67.9 | 91,620 | 61.0 | 48,165 | 32.1 |

*Source: Oral Health Programme, MOH*
** D: Carious tooth; F: Filled tooth*
***Class I : Caries involves only the occlusal surface of the posterior tooth*
***Class II : Caries involves other surfaces and/or occlusal of the posterior tooth*

Evaluation on trend of occlusal caries further justifies the need for fissure sealants. Thus, it is recommended that fissure sealant provision continues as an integral part of incremental care in primary schoolchildren aimed to prevent pit and fissure caries. With limited resources, priority should be given to high risk individuals and teeth.

- **Fluoride Varnish Programme For Toddlers**

In order to further strengthen the Early Childhood Oral Healthcare programme, Fluoride Varnish (FV) Programme was introduced for toddlers and piloted in Sabah, Kelantan, and Terengganu since 2011. FV is applied four (4) times with interval of six (6) months for each application. Thus, an identified toddler will complete this programme in a period of 2 years. In 2020, a total of 24,027 (93.2 percent) identified toddlers were rendered fluoride varnish in Kelantan, Terengganu and Sabah **(Table 63).**

From 2019 cohort, toddlers completing 4 times application is low **(Table 64)**. A portion of them is expected to complete 4 times application by July 2021. An increasing trend of caries free status among 6-year-old schoolchildren (Standard 1) at the piloted states was observed **(Figure 41).** Hence, this programme was further expanded to all states starting in 2019.

**Table 63:**
**Fluoride Varnish Application, 2011 to 2020**

| Year | Kelantan | | | Terengganu | | | Sabah | | | TOTAL | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Need FV | FV Applied | | Need FV | FV Applied | | Need FV | FV Applied | | Need FV | FV Applied | |
| | No. | No. | % | No. | No. | % | No. | No. | % | No. | No. | % |
| 2011 | 4,337 | 1,650 | 38.0 | 6,141 | 5,612 | 91.4 | 2,989 | 2,975 | 99.5 | 13,467 | 10,237 | 76.0 |
| 2012 | 5,530 | 2,616 | 47.3 | 7,742 | 7,004 | 90.5 | 6,408 | 6,232 | 97.3 | 19,680 | 15,852 | 80.6 |
| 2013 | 5,816 | 2,875 | 49.4 | 11,269 | 10,333 | 91.7 | 12,147 | 11,380 | 93.7 | 29,232 | 24,588 | 84.1 |
| 2014 | 8,037 | 3,656 | 45.5 | 14,720 | 13,659 | 92.8 | 11,018 | 10,245 | 93.0 | 33,775 | 27,560 | 81.6 |
| 2015 | 33,596 | 5,496 | 16.4 | 13,004 | 11,981 | 92.1 | 9,676 | 7,764 | 80.2 | 56,276 | 25,241 | 44.9 |
| 2016 | 9,506 | 7,032 | 74.0 | 16,704 | 15,662 | 93.8 | 10,101 | 9,509 | 94.1 | 36,311 | 32,203 | 88.7 |
| 2017 | 15,918 | 10,600 | 66.6 | 22,579 | 20,222 | 89.6 | 8,909 | 8,805 | 98.8 | 47,406 | 39,627 | 83.6 |
| 2018 | 16,909 | 12,971 | 76.7 | 21,191 | 21,191 | 100.0 | 9,727 | 9,315 | 95.8 | 47,827 | 43,477 | 90.9 |
| 2019 | 9,971 | 9,665 | 96.9 | 19,893 | 19,893 | 100.0 | 10,694 | 9,785 | 91.3 | 40,558 | 39,343 | 97.0 |
| 2020 | 9,313 | 7,569 | 81.3 | 10,522 | 10,522 | 100.0 | 5,939 | 5,936 | 99.9 | 25,774 | 24,027 | 93.2 |

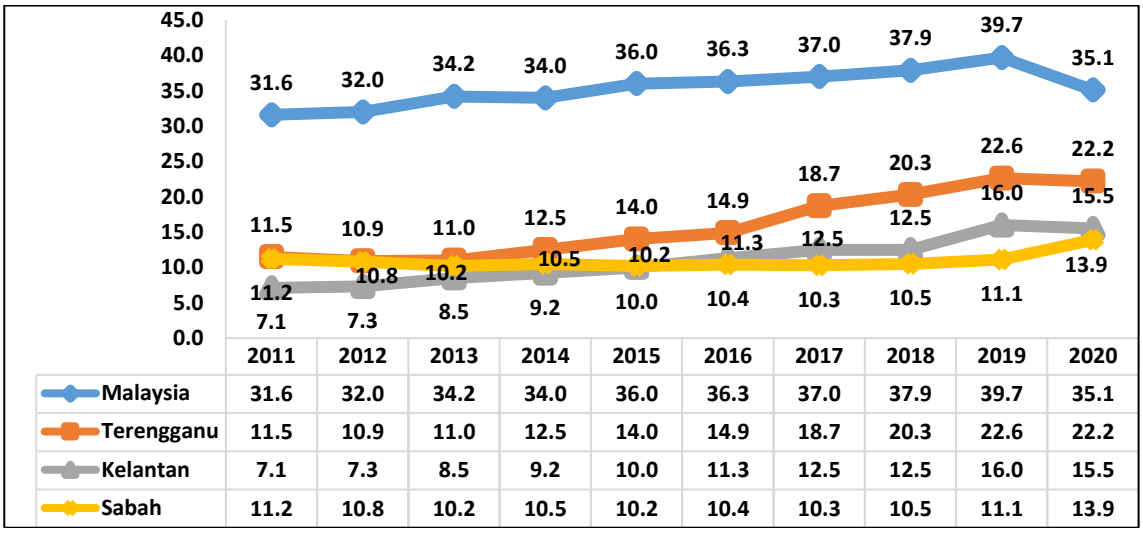
*Source: Oral Health Programme, MOH*

**Table 64:**
**Compliance Rate for Fluoride Varnish Application Done for 2019 Cohort at Piloted States**

| State | Need FV | Rendered FV | With 2 times application | | With 3 times application | | With 4 times application | | Compliance to six-monthly application (±1 month) | |
|---|---|---|---|---|---|---|---|---|---|---|
| | No. | No. | No. | % | No. | % | No. | % | No. | % |
| Kelantan | 9,971 | 9,665 | 4,267 | 44.1 | 1,447 | 15.0 | 331 | 3.4 | 112 | 1.2 |
| Terengganu | 19,916 | 19,916 | 6,775 | 34.0 | 1,661 | 8.3 | 154 | 0.8 | 84 | 0.4 |
| Sabah | 9,557 | 9,474 | 4,301 | 45.4 | 1,449 | 15.3 | 347 | 3.7 | 114 | 1.2 |
| **TOTAL** | 39,444 | 39,055 | 15,343 | 39.3 | 4,557 | 11.7 | 832 | 2.1 | 310 | 0.8 |

*Source: Oral Health Programme, MOH*

**Figure 41:**
**Caries Free Status Among 6 Years Old (Standard 1) in Kelantan, Terengganu & Sabah, 2011 to 2020**




| | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 |
|---|---|---|---|---|---|---|---|---|---|---|
| Malaysia | 31.6 | 32.0 | 34.2 | 34.0 | 36.0 | 36.3 | 37.0 | 37.9 | 39.7 | 35.1 |
| Terengganu | 11.5 | 10.9 | 11.0 | 12.5 | 14.0 | 14.9 | 18.7 | 20.3 | 22.6 | 22.2 |
| Kelantan | 7.1 | 7.3 | 8.5 | 9.2 | 10.0 | 11.3 | 12.5 | 12.5 | 16.0 | 15.5 |
| Sabah | 11.2 | 10.8 | 10.2 | 10.5 | 10.2 | 10.4 | 10.3 | 10.5 | 11.1 | 13.9 |

*Source: Oral Health Programme, MOH*

- **School-Based Fluoride Mouth Rinsing Programme**

School-based fluoride mouth rinsing (FMR) programme has been carried out for Year 1 to Year 6 schoolchildren in the selected schools in low/non-fluoridated area in Sabah, Sarawak and Kelantan. In 2020, 96 schools and 23,739 students benefited from this programme **(Table 65)**. It is recommended that FMR Programme be continued in communities with low/no water fluoridation programme with vigilant monitoring by the oral healthcare professionals.

**Table 65:**
**Schools and Students Participating in FMR Programme, 2016 to 2020**

| State | No of Schools participated | | | Total | No of student involved | | | Total |
|---|---|---|---|---|---|---|---|---|
| | Kelantan | Sabah | Sarawak | | Kelantan | Sabah | Sarawak | |
| 2016 | 6 | 54 | 23 | **83** | 673 | 18,029 | 4,173 | **22,875** |
| 2017 | 4 | 48 | 22 | **74** | 446 | 16,035 | 4,227 | **20,708** |
| 2018 | 4 | 37 | 23 | **64** | 415 | 14,386 | 3,839 | **18,640** |
| 2019 | 24 | 54 | 23 | **101** | 1,293 | 21,771 | 3,929 | **26,993** |
| 2020 | 32 | 44 | 20 | **96** | 2,682 | 18,250 | 2,807 | **23,739** |

*Source: Oral Health Programme, MoH*

## Community Oral Health Services

Community oral health services included dental services conducted at Urban Transformation Centre (UTC), Rural Transformation Centre (RTC) and institutions for the elderly and the special needs individual. There are also dental outreach services provided for remote population in Sabah and Sarawak, namely "Organize Health Fairs for Sabah and Sarawak". Community oral health services also include outreach services providing promotive, preventive and curative care held at People's Housing Project (*PPR*) for the B40 communities.

All of these activities utilised mobile dental clinic/mobile dental lab/mobile dental team. However, overall decreasing pattern was observed in the community oral health services for the year 2020 due to COVID-19 pandemic. Standard Operating Procedures (SOPs) and Movement Control Order (MCO) enforced during the pandemic restricted community activities/ gatherings.

- **Mobile Dental Clinic**

The Mobile Dental Clinic (MDC) is a vehicle converted into a dental clinic equipped with static dental equipment to provide outreach dental services. Among the existing MDC are buses, trailers, coasters and caravans. The information on MDC is as listed in **Table 66**.

**Table 66:**
**Information on Mobile Dental Clinic (MDC), 2020**

| State | Total MDC | Location in State | Total Dental Chair | No. of Days Operated | Attendance | |
|---|---|---|---|---|---|---|
| | | | | | New | Repeat |
| Perlis | 1 | Kangar | 2 | 68 | 600 | 262 |
| Kedah | 3 | Kota Setar | 2 | 110 | 892 | 21 |
| | | Baling | 2 | 4 | | |
| | | Kulim | 2 | 18 | | |
| Penang | 3 | Timur Laut | 1 | 6 | 678 | 74 |
| | | Seberang Perai Utara | 2 | 5 | | |
| | | Barat Daya | 0 | 13 | | |
| Perak | 3 | Kinta | 2 | 18 | 602 | 131 |
| | | Hilir Perak | 2 | 137 | 302 | 1,317 |
| | | Larut Matang | 2 | 0 | 0 | 0 |
| Selangor | 3 | Gombak | 2 | 1 | 4,846 | 772 |
| | | Petaling | 2 | 54 | | |
| | | Klang | 2 | 35 | | |
| FT KL & Putrajaya | 2 | Kepong | 2 | 5 | 117 | 0 |
| | | Titiwangsa | 2 | 0 | 0 | 0 |
| Negeri Sembilan | 1 | Kuala Pilah | 2 | 24 | 16 | 13 |
| Melaka | 1 | Melaka Tengah | 2 | 6 | 261 | 0 |
| Johor | 4 | Johor Bahru | 2 | 97 | 5,265 | 554 |
| | | Muar | 1 | 10 | | |
| | | Kluang | 1 | 124 | | |
| | | Batu Pahat | 0 | 78 | | |
| Pahang | 3 | Kuantan | 1 | 30 | 768 | 37 |
| | | Maran | 2 | 57 | 164 | 79 |
| | | Kuala Lipis | 1 | 81 | 596 | 20 |
| Terengganu | 2 | KP Jalan Air Jernih | 2 | 34 | 486 | 15 |
| | | KP Batu Rakit, | 2 | 5 | 69 | 1 |
| Kelantan | 4 | Pasir Mas | 2 | 0 | 0 | 0 |
| | | Tanah Merah | 0 | 79 | 574 | 142 |
| | | Kuala Krai | 0 | 9 | 198 | 4 |
| | | Kota Bharu | 2 | 19 | 195 | 27 |
| FT Labuan | 0 | Nil | Nil | 0 | 0 | 0 |
| Sabah | 2 | Kota Kinabalu | 2 | 25 | 486 | 0 |
| | | Tawau | 2 | 0 | 0 | 0 |
| Sarawak | 4 | Kuching | 1 | 12 | 151 | 6 |
| | | Miri | 1 | 5 | 465 | 190 |

| State | Total MDC | Location in State | Total Dental Chair | No. of Days Operated | Attendance | |
|---|---|---|---|---|---|---|
| | | | | | New | Repeat |
| | | Samarahan | 1 | 37 | 1,909 | 18 |
| | | Sibu | 1 | 18 | 464 | 129 |
| **MALAYSIA** | **36** | | **55** | **1,224** | **20,104** | **3,812** |

*Source: Oral Health Programme, MOH*

- **Mobile Dental Laboratory**

A Mobile Dental Laboratory (MDL) is a vehicle converted into a dental laboratory equipped with laboratory equipment to provide outreach denture manufacturing and repair services. MDL operates together with mobile dental clinic or mobile dental team in providing services to the community including movement across state borders where appropriate. MDL consists of one or two workstation units. Overall, there were 4 MDL in 2020 and the information on MDL is as listed in **Table 67**.

**Table 67:**
**Information on Mobile Dental Laboratory (MDL), 2020**

| State | Total MDL | Location in State | No of Days Operated | Attendance | | Denture | |
|---|---|---|---|---|---|---|---|
| | | | | New | Repeat | Full | Partial |
| **Perak** | 1 | Larut Matang & Selama | 0 | 0 | 0 | 0 | 0 |
| **Kelantan** | 2 | Jeli | 19 | 35 | 52 | 65 | 45 |
| | | Tanah Merah | 184 | 189 | 345 | 63 | 6 |
| **Negeri Sembilan** | 1 | Seremban | 22 | 33 | 99 | 26 | 34 |
| **TOTAL** | **4** | | **225** | **257** | **496** | **154** | **85** |

*Source: Oral Health Programme, MOH*

- **Urban Transformation Centre (UTC)**

In 2020, there were 23 dental clinics operating at UTCs in the country as listed in **Table 68**. A total of 161,184 patients attended the dental clinics in UTCs in 2020 compared to 378,929 in 2019, 355,670 in 2018 and 287,640 in 2017. The increasing trend of patients attending the UTCs was due to the increase in the number of UTCs and also due to awareness of the public about the existence of these UTCs.

**Table 68:**
**Oral Health Services in UTCs, 2016 to 2020**

| Year | Dental clinics at UTCs | | Patient Attendances |
|---|---|---|---|
| | No. | Location | |
| 2016 | 17 | Ayer Keroh Melaka, Pudu Sentral, Kompleks MBAS, Ipoh, Mini Sentul, Kuantan, Kota Kinabalu, Galeria Johor, Kuching Sarawak, Sungai Petani Kedah, Labuan, Sibu Sarawak, Miri Sarawak, Terengganu, Tawau Sabah, Kota Bharu Kelantan, Keningau Sabah | 219,934 |
| 2017 | 20 | Ayer Keroh Melaka, Pudu Sentral, Kompleks MBAS, Ipoh, Mini Sentul, Kuantan, Kota Kinabalu, Galeria Johor, Kuching Sarawak, Sungai Petani Kedah, Labuan, Sibu Sarawak, Miri Sarawak, Terengganu, Tawau Sabah, Kota Bharu Kelantan, Keningau Sabah, Kangar Perlis, Seremban Negeri Sembilan, Pasir Gudang Johor | 287,640 |
| 2018 | 21 | Ayer Keroh Melaka, Pudu Sentral, Kompleks MBAS, Ipoh, Mini Sentul, Kuantan, Kota Kinabalu, Galeria Johor, Kuching Sarawak, Sungai Petani Kedah, Labuan, Sibu Sarawak, Miri Sarawak, Terengganu, Tawau Sabah, Kota Bharu Kelantan, Keningau Sabah, Kangar Perlis, Seremban Negeri Sembilan, Pasir Gudang Johor, UTC Shah Alam Selangor. | 355,670 |
| 2019 | 22 | Ayer Keroh Melaka, Pudu Sentral, Kompleks MBAS, Ipoh, Mini Sentul, Kuantan, Kota Kinabalu, Galeria Johor, Kuching Sarawak, Sungai Petani Kedah, Labuan, | 378,929 |

| Year | Dental clinics at UTCs | | Patient Attendances |
|---|---|---|---|
| | No. | Location | |
| | | Sibu Sarawak, Miri Sarawak, Terengganu, Tawau Sabah, Kota Bharu Kelantan, Keningau Sabah, Kangar Perlis, Seremban Negeri Sembilan, Pasir Gudang Johor, UTC Shah Alam Selangor, UTC Keramat | |
| 2020 | 23 | Ayer Keroh Melaka, Pudu Sentral, Kompleks MBAS, Ipoh, Mini Sentul, Kuantan, Kota Kinabalu, Galeria Johor, Kuching Sarawak, Sungai Petani Kedah, Labuan, Sibu Sarawak, Miri Sarawak, Terengganu, Tawau Sabah, Kota Bharu Kelantan, Keningau Sabah, Kangar Perlis, Seremban Negeri Sembilan, Pasir Gudang Johor, UTC Shah Alam Selangor, UTC Keramat, UTC Komtar. | 161,184 |

*Source: Oral Health Programme, MOH*

- **Rural Transformation Centre (RTC)**

RTC aims to serve as one-stop centre to facilitate access by the rural population to services provided by various government and non-governmental agencies. Dental Clinic is among the services available in RTC. It is implemented to deliver outpatient dental care and at the same time to develop optimum oral healthcare for the rural population. In 2020, there were six (6) RTCs in the country, namely RTC Wakaf Che Yeh (Kelantan), RTC Sungai Rambai (Melaka), RTC Kuala Pahang, Pekan (Pahang), RTC Napoh, Jitra (Kedah), RTC Sibuti (Sarawak) and RTC Mid Layar, Betong (Sarawak). Services provided at the RTCs are dental examination and basic dental treatment such as dental extraction, filling and scaling. A total of 8,777 patients visited dental clinics in RTCs in 2020 **(Table 69)**.

**Table 69:**
**Oral Health Services in RTCs, 2016 to 2020**

| Year | Dental clinics at RTCs | | Patient Attendances |
|---|---|---|---|
| | No. | Location | |
| 2016 | 8 | Gopeng, Wakaf Che Yeh, Pekan, Jitra, Kulaijaya, Sibuti, Mid Layar, Sungai Rambai | 9,577 |
| 2017 | 8 | Gopeng, Wakaf Che Yeh, Pekan, Jitra, Kulaijaya, Sibuti, Mid Layar, Sungai Rambai | 11,338 |
| 2018 | 8 | Gopeng, Wakaf Che Yeh, Pekan, Jitra, Kulaijaya, Sibuti, Mid Layar, Sungai Rambai | 13,059 |
| 2019 | 7 | Gopeng, Wakaf Che Yeh, Pekan, Jitra, Sibuti, Mid Layar, Sungai Rambai | 14,171 |
| 2020 | 6 | Wakaf Che Yeh, Pekan, Jitra, Sibuti, Mid Layar, Sungai Rambai | 8,777 |

*Source: Oral Health Programme, MOH*

- **Organize Health Fairs for Sabah and Sarawak**

Ministry of Health is the lead agency for 'Organize Health Fairs for Sabah & Sarawak' initiative together with Implementation Coordination Unit (ICU) of Prime Minister's Department, Ministry of Education (MOE), Ministry of Defense (MinDef), Ministry of Finance (MOF) and the state government of Sabah and Sarawak. This initiative aims at providing various services for the convenience of the people in Sabah and Sarawak. The oral health services delivered were oral health examination, screening for oral pre-cancer and cancer, filling, extraction, scaling and oral health promotion activities**.** In 2020, a total of 46 health fairs were organised in Sabah and Sarawak with 6,151 patients seen; 4,579 in Sabah and 1,572 in Sarawak **(Table 70)**.

**Table 70:**
**Oral Health Activities Conducted During Organize Health Fairs in Sabah and Sarawak, 2016 to 2020**

| Year | Sabah | | | Sarawak | | |
|---|---|---|---|---|---|---|
| | No. of Health Fair | No. of patients Attendance | No. of Participants for Oral Health Talks | No. of Health Fair | No. of Patients attendance | No. of Participants for Oral Health Talks |
| 2016 | 190 | 22,258 | 2,402 | 331 | 21,332 | 5,392 |
| 2017 | 106 | 13,814 | 2,102 | 73 | 15,250 | 4,789 |
| 2018 | 167 | 12,317 | 2,573 | 107 | 8,538 | 2,650 |
| 2019 | 324 | 20,904 | 4,799 | 178 | 8,619 | 2,119 |
| 2020 | 32 | 4,579 | 843 | 14 | 1,572 | 453 |

*Source: Oral Health Programme, MOH*

- **Oral Health Services at Elderly and Special Needs Institutions**

Outreach oral healthcare at elderly and special needs (*PDK, Pusat Pemulihan Dalam Komuniti* and non-*PDK)* institutions through mobile dental teams/clinics aims to provide holistic support in terms of health and social to these identified groups with collaboration between government and non-government agencies. A total of 107 institutions for the elderly were visited and 1,986 patients were seen in 2020. The highest number of patients seen and institutions visited was in Perak, 769 patients and 41 institutions **(Table 71)**. There were 258 institutions for the special needs visited in 2020, with highest coverage in Johor (40). A total of 4,783 patients were seen in 2020, the highest seen was in Sabah (902) **(Table 72)**.

**Table 71:**
**Number of Elderly Patients Seen in Institution, 2020**

| State | Government Institution | | Private Institution | | Total Patients Seen |
|---|---|---|---|---|---|
| | No. of Institution | No. of Institution Visited | No. of Institution | No. of Institution Visited | |
| Perlis | 2 | 0 | 2 | 0 | 11 |
| Kedah | 3 | 0 | 19 | 2 | 21 |
| Penang | 2 | 0 | 40 | 3 | 46 |
| Perak | 5 | 2 | 70 | 39 | 769 |
| Selangor | 5 | 2 | 56 | 8 | 207 |
| FT KL | 3 | 0 | 6 | 0 | 18 |
| FT Putrajaya | 0 | 0 | 0 | 0 | 0 |
| N. Sembilan | 0 | 0 | 22 | 4 | 39 |
| Melaka | 4 | 0 | 10 | 1 | 18 |
| Johor | 15 | 4 | 65 | 15 | 423 |
| Pahang | 8 | 8 | 23 | 3 | 128 |
| Terengganu | 6 | 1 | 1 | 1 | 59 |
| Kelantan | 2 | 1 | 7 | 3 | 89 |
| Sabah | 23 | 4 | 12 | 1 | 68 |
| Sarawak | 3 | 3 | 7 | 2 | 90 |
| FT Labuan | 0 | 0 | 0 | 0 | 0 |
| **MALAYSIA** | **81** | **25** | **340** | **82** | **1,986** |

*Source: Oral Health Programme, MOH*

**Table 72:**
**Number of Special Needs Patients Seen in Institution, 2020**

| State | *PDK* | | Non *PDK* | | Total Patients Seen |
|---|---|---|---|---|---|
| | No. of Institution | No. of Institution Visited | No. of Institution | No. of Institution Visited | |
| Perlis | 9 | 3 | 1 | 0 | 54 |
| Kedah | 42 | 12 | 5 | 1 | 300 |
| Penang | 24 | 5 | 7 | 3 | 173 |
| Perak | 41 | 16 | 22 | 8 | 335 |
| Selangor | 51 | 15 | 4 | 2 | 335 |
| FT KL | 10 | 0 | 0 | 0 | 80 |
| FT Putrajaya | 3 | 2 | 3 | 1 | 46 |
| N. Sembilan | 44 | 31 | 2 | 1 | 504 |
| Melaka | 18 | 3 | 8 | 0 | 57 |
| Johor | 73 | 35 | 15 | 5 | 791 |
| Pahang | 52 | 10 | 7 | 2 | 142 |
| Terengganu | 47 | 29 | 1 | 0 | 437 |
| Kelantan | 44 | 15 | 1 | 1 | 242 |
| Sarawak | 49 | 13 | 10 | 5 | 362 |
| Sabah | 34 | 23 | 24 | 16 | 902 |
| FT Labuan | 2 | 1 | 1 | 0 | 23 |
| **MALAYSIA** | **543** | **213** | **111** | **45** | **4,783** |

*Source: Oral Health Programme, MOH*

- **Mobile Community Services**

Mobile Community Services was organised by the National Strategic Unit (NSU), Ministry of Finance. The aim of this initiative is to assemble main services of various government agencies according to local needs and at identified location based on the concept of UTC/RTC. The involvement in this initiative only through invitation by NSU. There were three (3) activities conducted in 2020 with 91 attendances **(Table 73)**.

**Table 73:**
**Oral Health Programmes Conducted, 2020**

| Date | Location |
|---|---|
| 20 February 2020 | *Program Perkhidmatan Komuniti Bergerak (MCS) Daerah Kinabatangan, Sabah* |
| 25 February 2020 | *Program Perkhidmatan Komuniti Bergerak (MCS) Daerah Nabawan, Sabah* |
| 25 February 2020 | *Program Pemeriksaan Kesihatan* HEALTH IS WEALTH *Persatuan Pegawai Kanan Kastam Malaysia (PERKASA) Cawangan Putrajaya* |

*Source: Oral Health Programme, MOH*

- **Outreach Services at People's Housing Project (*PPR*)**

This initiative was started in 2018, targeting the marginalised population of the lower socio-economic status. Thus, outreach services providing promotive, preventive and curative care utilising mobile dental clinic/mobile dental lab/mobile dental team were held at PPRs for the B40 communities. In 2020, a total of 4 PPRs were visited and 228 residents received oral healthcare **(Table 74)**.

**Table 74:**
**Outreach Services at PPR, 2020**

| States | No. of PPRs visited | No. of Patients Seen |
|---|---|---|
| Selangor | 1 | 84 |
| Melaka | 1 | 26 |
| Kelantan | 1 | 59 |
| Sarawak | 1 | 59 |
| **TOTAL** | **4** | **228** |

*Source: Oral Health Programme, MOH*

## Primary Prevention & Early Detection Of Oral Potentially Malignant Disorders (OPMDS) & Oral Cancers

Oral cancer remains a major health concern in Malaysia. The Oral Health Programme continues its emphasis on Primary Prevention and Early Detection of Oral Potentially Malignant Diseases (OPMDs) and Oral Cancers Programme since 1997 in collaboration with relevant agencies.

- **High Risk Community**

In 2020, 90 high-risk communities were visited and 1,475 residents aged 18 years and above were screened for oral lesions Among the screened patients, only three (3) were seen with lesions but these patients refused to be referred to Oral and Maxillofacial Surgery (OMFS)/Oral Pathology and Oral Medicine (OPOM) specialists for further investigation and management **(Table 75,76)**. Of the malignant cases detected with TNM staging reported from 2011 to 2020 in community/high risk community screening, 50.0 percent were detected at stage 1 and 40.0 percent were detected at later stages, stage 3 and 4 **(Table 77)**. There is a need to improve patient's compliance for referral to prevent delayed treatment.

**Table 75:**
**Patients Screened and Referred by State (High Risk Community Screening), 2020**

| State | No. of Patients Screened | No. of Patients with Lesion | | No. of Referred Patients |
|---|---|---|---|---|
| | | n | % | |
| Perlis | 0 | 0 | 0.0 | 0 |
| Kedah | 0 | 0 | 0.0 | 0 |
| Penang | 0 | 0 | 0.0 | 0 |
| Perak | 1,007 | 0 | 0.0 | 0 |
| Selangor | 0 | 0 | 0.0 | 0 |
| FT KL & Putrajaya | 0 | 0 | 0.0 | 0 |
| N. Sembilan | 7 | 0 | 0.0 | 0 |
| Melaka | 0 | 0 | 0.0 | 0 |
| Johor | 126 | 0 | 0.0 | 0 |
| Pahang | 162 | 2 | 1.2 | 0 |
| Terengganu | 0 | 0 | 0.0 | 0 |
| Kelantan | 64 | 1 | 1.6 | 0 |
| **Pen. Malaysia** | **1,366** | **3** | **0.2** | **0** |
| Sabah | 70 | 0 | 0.0 | 0 |
| Sarawak | 16 | 0 | 0.0 | 0 |
| FT Labuan | 23 | 0 | 0.0 | 0 |
| **MALAYSIA** | **1,475** | **3** | **0.2** | **0** |

*Source: Oral Health Programme, MoH*

**Table 76:**
**Patients Screened and Referred (Community/High Risk Community Screening), 2016 to 2020**

| Year | No. of Patients Screened | No. With Lesion | | No. Referred | No. Seen by Surgeons | |
|---|---|---|---|---|---|---|
| | | n | % | | n | % |
| 2016 | 15,350 | 28 | 0.2 | 15 | 9 | 60.0 |
| 2017 | 14,293 | 12 | 0.1 | 4 | 0 | 0.0 |
| 2018 | 2,972 | 5 | 0.2 | 3 | 2 | 66.7 |
| 2019 | 2,888 | 12 | 0.4 | 3 | 0 | 0.0 |
| 2020 | 1,475 | 3 | 0.2 | 0 | 0 | 0.0 |
| **TOTAL** | **36,978** | **60** | **0.2** | **25** | **11** | **44** |

*Source: Oral Health Programme, MOH*

**Table 77:**
**Clinical and Histological Diagnosis of Referred Cases**
**(Community/High Risk Community Screening), 2016 to 2020**

| Year | No. of Cases Seen by Specialists | Clinical Diagnosis | | | | | | Histological Diagnosis* | | | | | | | | Staging | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Leukoplakia | Erythroplakia | Lichen Planus | Submucous Fibrosis | Suspicious of Oral Cancer | Other Pathology | Hyperkeratosis | Epithelial Dysplasia | Carcinoma In-situ | Invasive Squamous Cell Carcinoma | Oral Lichen Planus | Oral Submucous Fibrosis | Other Malignancy | Benign Pathologies | Stage 1 | Stage 2 | Stage 3 | Stage 4 |
| 2016 | 9 | 1 | 1 | 4 | 0 | 2 | 1 | 0 | 0 | 0 | 1 | 2 | 0 | 1 | 0 | 5 | 0 | 0 | 0 |
| 2017 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2018 | 2 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| 2019 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2020 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **TOTAL** | **11** | **1** | **1** | **4** | **0** | **3** | **2** | **0** | **0** | **0** | **2** | **2** | **0** | **1** | **0** | **5** | **0** | **0** | **1** |

*Source: Oral Health Programme, MOH*
**Histological diagnosis only available for cases with biopsy done*

### Opportunistic Screening for Walk-in Patients and Other Communities

In 2020, a total of 601,075 patients were screened in the dental clinics and other communities, 917 patients were found with lesions and 579 were referred to OMFS/OPOM specialists for further investigation and management. Of these, 485 (83.8 percent) complied with referral to specialists **(Table 78 & 79)**. A higher number of malignant cases were detected among patients screened in the opportunistic screening compared to screening at high risk communities **(Table 80)**.

**Table 78:**
**Patients Screened and Referred by State (Opportunistic Screening), 2020**

| State | No. of new attendees | No. of Patients Screened | No. With Lesion | | No. Referred | No. Seen by Surgeons | |
|---|---|---|---|---|---|---|---|
| | | | n | % | | n | % |
| Perlis | 23,640 | 19,086 | 14 | 0.1 | 13 | 13 | 100.0 |
| Kedah | 101,132 | 40,395 | 32 | 0.1 | 25 | 19 | 76.0 |
| Penang | 90,067 | 45,698 | 43 | 0.1 | 39 | 34 | 87.2 |
| Perak | 150,638 | 114,714 | 82 | 0.1 | 74 | 56 | 75.7 |
| Selangor | 197,040 | 25,623 | 181 | 0.7 | 125 | 98 | 78.4 |

| State | No. of new attendees | No. of Patients Screened | No. With Lesion | | No. Referred | No. Seen by Surgeons | |
|---|---|---|---|---|---|---|---|
| | | | n | % | | n | % |
| FT KL & Putrajaya | 102,423 | 33,736 | 50 | 0.2 | 45 | 29 | 64.4 |
| N. Sembilan | 117,314 | 9,050 | 23 | 0.3 | 23 | 20 | 87.0 |
| Melaka | 70,355 | 7,685 | 38 | 0.5 | 30 | 27 | 90.0 |
| Johor | 231,945 | 207,132 | 187 | 0.1 | 28 | 25 | 89.3 |
| Pahang | 131,568 | 20,787 | 43 | 0.2 | 35 | 34 | 97.1 |
| Terengganu | 92,274 | 11,145 | 19 | 0.2 | 8 | 8 | 100.0 |
| Kelantan | 92,899 | 19,565 | 84 | 0.4 | 61 | 58 | 95.1 |
| **Pen. Malaysia** | **1,401,295** | **554,616** | **796** | **0.1** | **506** | **421** | **83.2** |
| Sabah | 73,204 | 42,771 | 58 | 0.1 | 33 | 29 | 87.9 |
| Sarawak | 131,348 | 2,968 | 62 | 2.1 | 39 | 35 | 89.7 |
| FT Labuan | 9,911 | 720 | 1 | 0.1 | 1 | 0 | 0.0 |
| **MALAYSIA** | **1,615,758** | **601,075** | **917** | **0.2** | **579** | **485** | **83.8** |

*Source: Oral Health Programme, MOH*

**Table 79:**
**Patients Screened and Referred (Opportunistic Screening), 2015 to 2020**

| Year | No. of new attendees | No of Patients Screened | No. With Lesion | | No. Referred | No. Seen by Surgeons | |
|---|---|---|---|---|---|---|---|
| | | | n | % | | n | % |
| **2015** | 2,036,106 | 61,109 | 464 | 0.8 | 282 | 139 | 49.3 |
| **2016** | 2,178,330 | 88,947 | 309 | 0.3 | 214 | 129 | 60.3 |
| **2017** | 2,325,005 | 107,582 | 367 | 0.3 | 328 | 200 | 61.0 |
| **2018** | 2,468,360 | 113,650 | 969 | 0.9 | 478 | 348 | 72.8 |
| **2019** | 2,387,229 | 112,748 | 949 | 0.8 | 496 | 406 | 81.9 |
| **2020** | 1,615,758 | 601,075 | 917 | 0.2 | 579 | 485 | 83.8 |
| **TOTAL** | **14,721,885** | **1,140,982** | **4,324** | **0.4** | **2,566** | **1,800** | **70.1** |

*Source: Oral Health Programme, MOH*

**Table 80:**
**Clinical and Histological Diagnosis of Referred Cases (Opportunistic Screening) by States, 2020**

| State | No. of Cases Seen by Specialists | Clinical Diagnosis | | | | | | Histological diagnosis* | | | | | | | | Staging | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Leukoplakia | Erythroplakia | Lichen Planus | Submucous Fibrosis | Suspicious of Oral Cancer | Other Pathology | Hyperkeratosis | Epithelial Dysplasia | Carcinoma In-situ | Invasive Squamous Cell Carcinoma | Oral Lichen Planus | Oral Submucous Fibrosis | Other Malignancy | Benign Pathologies | Stage 1 | Stage 2 | Stage 3 | Stage 4 |
| Perlis | 13 | 0 | 0 | 0 | 0 | 0 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 1 | 0 | 0 | 1 |
| Kedah | 19 | 0 | 0 | 2 | 0 | 3 | 8 | 0 | 0 | 0 | 3 | 1 | 0 | 1 | 6 | 0 | 1 | 1 | 3 |
| Penang | 34 | 2 | 0 | 2 | 1 | 6 | 9 | 0 | 0 | 0 | 5 | 1 | 1 | 0 | 4 | 0 | 1 | 0 | 3 |
| Perak | 56 | 2 | 0 | 5 | 0 | 10 | 35 | 2 | 1 | 1 | 8 | 1 | 0 | 1 | 11 | 0 | 3 | 1 | 4 |
| Selangor | 98 | 0 | 0 | 5 | 3 | 12 | 25 | 1 | 0 | 0 | 9 | 2 | 1 | 1 | 8 | 2 | 3 | 5 | 8 |
| FT KL & Putrajaya | 29 | 1 | 1 | 3 | 0 | 1 | 6 | 1 | 3 | 0 | 1 | 0 | 0 | 0 | 5 | 0 | 1 | 1 | 3 |
| Negeri Sembilan | 20 | 1 | 0 | 0 | 0 | 2 | 6 | 0 | 0 | 0 | 3 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 0 |
| Melaka | 27 | 0 | 0 | 1 | 0 | 3 | 10 | 0 | 0 | 0 | 1 | 1 | 0 | 1 | 6 | 1 | 0 | 2 | 0 |
| Johor | 25 | 0 | 0 | 0 | 0 | 5 | 4 | 1 | 0 | 0 | 6 | 0 | 0 | 1 | 3 | 2 | 0 | 1 | 4 |
| Pahang | 34 | 0 | 0 | 0 | 0 | 6 | 6 | 0 | 0 | 0 | 4 | 0 | 0 | 2 | 1 | 0 | 3 | 1 | 11 |

| State | No. of Cases Seen by Specialists | Clinical Diagnosis | | | | | | Histological diagnosis* | | | | | | | | Staging | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Leukoplakia | Erythroplakia | Lichen Planus | Submucous Fibrosis | Suspicious of Oral Cancer | Other Pathology | Hyperkeratosis | Epithelial Dysplasia | Carcinoma In-situ | Invasive Squamous Cell Carcinoma | Oral Lichen Planus | Oral Submucous Fibrosis | Other Malignancy | Benign Pathologies | Stage 1 | Stage 2 | Stage 3 | Stage 4 |
| Terengganu | 8 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 |
| Kelantan | 58 | 0 | 0 | 0 | 0 | 2 | 14 | 0 | 0 | 0 | 3 | 0 | 0 | 1 | 11 | 0 | 1 | 0 | 4 |
| **Pen. M'sia** | **421** | **6** | **1** | **18** | **4** | **50** | **131** | **5** | **4** | **1** | **43** | **6** | **2** | **8** | **58** | **8** | **14** | **13** | **41** |
| Sabah | 29 | 0 | 0 | 1 | 0 | 9 | 3 | 2 | 1 | 0 | 10 | 0 | 0 | 0 | 3 | 1 | 2 | 1 | 14 |
| Sarawak | 35 | 1 | 0 | 5 | 0 | 9 | 6 | 1 | 1 | 0 | 4 | 4 | 0 | 1 | 4 | 3 | 0 | 0 | 6 |
| FT Labuan | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **MALAYSIA** | **485** | **7** | **1** | **24** | **4** | **68** | **140** | **8** | **6** | **1** | **57** | **10** | **2** | **9** | **65** | **12** | **16** | **14** | **61** |

*Source: Oral Health Programme, MOH*
**Histological diagnosis only available for cases with biopsy done*

Opportunistic screening data is available starting 2014. Among the malignant cases with TNM staging reported from 2014 to 2020, 15.2 percent were detected at stage 1 and 68.5 percent were detected at later stages, stage 3 and 4 **(Table 81)**.

**Table 81:**
**Clinical and Histological Diagnosis of Referred Cases by Year (Opportunistic Screening), 2016 to 2020**

| Year | No. of Cases Seen by Specialists | Clinical Diagnosis | | | | | | Histological Diagnosis* | | | | | | | | Staging | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Leukoplakia | Erythroplakia | Lichen Planus | Submucous Fibrosis | Suspicious of Oral Cancer | Other Pathology | Hyperkeratosis | Epithelial Dysplasia | Carcinoma In-situ | Invasive Squamous Cell Carcinoma | Oral Lichen Planus | Oral Submucous Fibrosis | Other Malignancy | Benign Pathologies | Stage 1 | Stage 2 | Stage 3 | Stage 4 |
| 2016 | 129 | 8 | 1 | 8 | 2 | 56 | 48 | 6 | 4 | 5 | 36 | 7 | 0 | 8 | 17 | 17 | 9 | 8 | 12 |
| 2017 | 200 | 13 | 3 | 22 | 5 | 67 | 71 | 4 | 4 | 3 | 51 | 8 | 1 | 3 | 18 | 7 | 10 | 6 | 23 |
| 2018 | 348 | 40 | 3 | 53 | 4 | 90 | 158 | 14 | 20 | 13 | 55 | 16 | 0 | 7 | 58 | 8 | 6 | 15 | 36 |
| 2019 | 406 | 11 | 0 | 29 | 1 | 54 | 92 | 10 | 10 | 0 | 36 | 14 | 0 | 11 | 37 | 3 | 9 | 11 | 48 |
| 2020 | 485 | 7 | 1 | 24 | 4 | 68 | 140 | 8 | 6 | 1 | 57 | 10 | 2 | 11 | 65 | 12 | 16 | 14 | 61 |
| **TOTAL** | **1,800** | **86** | **8** | **155** | **23** | **412** | **634** | **44** | **46** | **27** | **294** | **66** | **6** | **54** | **219** | **57** | **61** | **61** | **195** |

*Source: Oral Health Programme, MOH 2020*
**Histological diagnosis only available for cases with biopsy done*

Combined data of community and opportunistic screening from 2011 to 2020 showed 16.2 percent were detected at stage 1 and 67.7 percent were detected at later stages, stage 3 and 4 **(Table 82)**. This achievement is still below the National Oral Health Plan for Malaysia 2011 to 2020 goal of '30 percent of oral cancers detected at stage I'.

**Table 82:**
**Clinical and Histological Diagnosis of Referred Cases (High Risk Community and Opportunistic Screening), 2016 to 2020**

| Year | No. of Cases Seen by Oral Surgeon | Clinical Diagnosis | | | | | | Histological Diagnosis* | | | | | | | | Staging | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Leukoplakia | Erythroplakia | Lichen Planus | Submucous Fibrosis | Suspicious of oral cancer | Other Pathology | Hyperkeratosis | Epithelial Dysplasia | Carcinoma In-situ | Invasive Squamous Cell Carcinoma | Oral Lichen Planus | Oral Submucous Fibrosis | Other Malignancy | Benign Pathologies | Stage 1 | Stage 2 | Stage 3 | Stage 4 |
| **2016** | 138 | 9 | 2 | 12 | 2 | 58 | 49 | 6 | 4 | 5 | 37 | 9 | 0 | 9 | 17 | 22 | 9 | 8 | 12 |
| **2017** | 200 | 13 | 3 | 22 | 5 | 67 | 71 | 4 | 4 | 3 | 51 | 8 | 1 | 3 | 18 | 7 | 10 | 6 | 23 |
| **2018** | 350 | 40 | 3 | 53 | 4 | 91 | 159 | 14 | 20 | 13 | 56 | 16 | 0 | 7 | 58 | 8 | 6 | 15 | 37 |
| **2019** | 406 | 11 | 0 | 29 | 1 | 54 | 92 | 10 | 10 | 0 | 36 | 14 | 0 | 11 | 37 | 3 | 9 | 11 | 48 |
| **2020** | 485 | 7 | 1 | 24 | 4 | 68 | 140 | 8 | 6 | 1 | 52 | 10 | 2 | 11 | 65 | 12 | 16 | 14 | 61 |
| **TOTAL** | **1,858** | **94** | **16** | **162** | **27** | **425** | **653** | **45** | **46** | **27** | **295** | **68** | **6** | **56** | **223** | **62** | **62** | **61** | **199** |

*Source: Oral Health Programme, MOH*
**Histological diagnosis only available for cases with biopsy done*

In 2020, oral health promotion for oral cancer was undertaken through 3,284 exhibitions and 9,775 chair side education/talks involving 144,487 adult patients/members of the communities **(Table 83)**.

**Table 83:**
**Promotion Activities for Oral Cancer, 2020**

| No. of Exhibitions held | Dental Health Talks | |
|---|---|---|
| | No. of talks given | No. of participants |
| 3,284 | 9,775 | 144,487 |

*Source: Oral Health Programme, MOH*

- **Mouth Cancer Awareness Week (MCAW)**

Mouth Cancer Awareness Week 2020 (MCAW 2020) was held from 7 to 13 November 2020 aimed to increase oral cancer awareness among health professionals and the public. Activities include screening of 28,366 people, 1,033 awareness campaigns/exhibitions and chair side education/talks to 31,867 individuals on risk habits **(Table 84, 85)**.

At the national level, MCAW 2020 was launched and in group by the honourable Minister of Health, YB Dato' Sri Dr Adham bin Baba on 7th November 2020 at Dewan Serbaguna, MOH. The event was conducted by the Oral Cancer Research & Coordinating Centre (OCRCC), Faculty of Dentistry, University of Malaya and Oral Health Programme (OHP), MOH along with another 17 agencies, namely the, Angkatan Tentera Malaysia (ATM), Universiti Kebangsaan Malaysia (UKM), Universiti Teknologi MARA (UiTM), Universiti Sains Islam Malaysia (USIM), Universiti Islam Antarabangsa Malaysia (UIAM), MAHSA University, SEGi University, International Medical University (IMU), Lincoln University College, Malaysian Dental Association (MDA), Malaysian Private Dental Practitioners Association (MPDPA), Malaysian

Association for Orofacial Disease (MAOFD), Malaysian Association of Oral & Maxillofacial Surgeons (MAOMS), Malaysian Association of Dental Public Health Specialists (MADPHS), Malaysian Society of Periodontology (MSP), Cancer Research Malaysia (CRM) and Malaysian Dental Students' Association (MDSA). Virtual Run/Walk programme and Instagram Video Competition were among the highlights in conjunction with the launch.

At state level, launching ceremony, oral cancer screening and various promotional activities were successfully conducted with adherence to the strict Standard Operational Procedures (SOPs) due to Movement Control Order (MCO) enforced during the week. Videos of launching ceremony for each state and CDC, DTCM were compiled and uploaded into OHP's Facebook.

**Table 84:**
**Screening and Counselling for MCAW 2020**

| State | Oral Screening | | | | *Advice/ Counselling |
|---|---|---|---|---|---|
| | Total Attendance | No of Patients with lesion and /or risk habit | No. of patients with lesion | No. of Patients Referred | No. of Participants |
| Perlis | 591 | 33 | 0 | 0 | 174 |
| Kedah | 1,809 | 320 | 1 | 1 | 1,224 |
| Penang | 1,603 | 255 | 2 | 2 | 753 |
| Perak | 3,305 | 404 | 5 | 4 | 575 |
| Selangor | 2,784 | 282 | 2 | 2 | 135 |
| FT KL & Putrajaya | 2,209 | 234 | 8 | 4 | 752 |
| Negeri Sembilan | 975 | 170 | 0 | 0 | 490 |
| Melaka | 1,148 | 136 | 2 | 1 | 143 |
| Johor | 1,506 | 292 | 1 | 1 | 209 |
| Pahang | 2,333 | 528 | 3 | 1 | 738 |
| Terengganu | 1,041 | 180 | 1 | 0 | 340 |
| Kelantan | 5,610 | 1,100 | 0 | 0 | 366 |
| Sabah | 842 | 227 | 2 | 0 | 427 |
| Sarawak | 2,565 | 626 | 9 | 6 | 739 |
| FT Labuan | 30 | 10 | 0 | 0 | 26 |
| CDC, DTCM*** | 15 | 0 | 0 | 0 | 0 |
| **MALAYSIA** | **28,366** | **4,797** | **36** | **22** | **7,091** |

*Source: Oral Health Programme, MOH*
**Example : Stop smoking habits/chewing betel quid/drinking alcohol/others.*

**Table 85:**
**Oral Health Education and Promotional Activities for MCAW, 2020**

| State | Oral Health Education | | | Oral Health Promotion (No. of activities held) | | | |
|---|---|---|---|---|---|---|---|
| | Talks | | | | | | |
| | Group | | Individual | | | | |
| | No. Held | No. of Participants | No. Held | Radio Talks | Television Talks | Exhibition / Campaigns | Others** |
| Perlis | 37 | 509 | 127 | 0 | 0 | 7 | 1 |
| Kedah | 194 | 1,236 | 1,076 | 0 | 0 | 117 | 44 |
| Penang | 147 | 1,192 | 953 | 0 | 0 | 94 | 165 |
| Perak | 218 | 1,832 | 1,544 | 1 | 0 | 60 | 52 |
| Selangor | 213 | 1,847 | 406 | 0 | 0 | 40 | 48 |
| FT KL & Putrajaya | 101 | 1,152 | 930 | 1 | 0 | 61 | 186 |
| Negeri Sembilan | 130 | 797 | 589 | 0 | 0 | 41 | 147 |
| Melaka | 94 | 1,142 | 682 | 1 | 0 | 24 | 24 |
| Johor | 85 | 710 | 385 | 0 | 0 | 36 | 17 |
| Pahang | 227 | 1,706 | 1,621 | 0 | 0 | 88 | 58 |
| Terengganu | 157 | 1,001 | 628 | 0 | 0 | 73 | 117 |
| Kelantan | 342 | 3,781 | 1,921 | 1 | 0 | 221 | 18 |
| Sabah | 83 | 972 | 617 | 0 | 0 | 105 | 42 |
| Sarawak | 154 | 1,957 | 376 | 8 | 1 | 60 | 65 |
| FT Labuan | 0 | 0 | 30 | 0 | 0 | 1 | 3 |
| ***CDC, DTCM | 5 | 148 | 0 | 0 | 0 | 5 | 5 |
| **MALAYSIA** | **2,187** | **19,982** | **11,885** | **12** | **1** | **1,033** | **992** |

*Source: Oral Health Programme, MOH*
***Example : MSE demonstration*
****Children's Dental Centre, Dental Training College, Malaysia*

- **Training**

In 2020, there were 26 calibration sessions done on Primary Prevention and Early Detection of Oral Potentially Malignant Diseases (OPMDs) and Oral Cancers Programme conducted by the states involving 706 dental officers. The highest number of officers trained was in Sarawak **(Table 86)**. A total of 4,168 dental and non-dental staffs had participated in 183 sessions of oral cancer awareness & Mouth Self Examination **(Table 87)**.

**Table 86:**
**Oral Cancer Calibration Session Conducted by States, 2020**

| States | Oral Cancer Calibration | |
|---|---|---|
| | No. of Sessions Conducted | No. of Dental Officers Trained |
| Perlis | 1 | 16 |
| Kedah | 0 | 0 |
| Penang | 1 | 22 |
| Perak | 1 | 39 |
| Selangor | 2 | 60 |
| FT KL & Putrajaya | 1 | 40 |
| N. Sembilan | 1 | 30 |
| Melaka | 2 | 50 |
| Johor | 2 | 60 |
| Pahang | 2 | 100 |
| Terengganu | 1 | 5 |
| Kelantan | 3 | 60 |

| States | Oral Cancer Calibration | |
|---|---|---|
| | No. of Sessions Conducted | No. of Dental Officers Trained |
| **Pen. Malaysia** | **0** | **0** |
| Sabah | 5 | 101 |
| Sarawak | 4 | 123 |
| FT Labuan | 0 | 0 |
| **MALAYSIA** | **26** | **706** |

*Source: Oral Health Programme, MOH*

**Table 87:**
**Awareness & Mouth Self Examination Session Conducted by States, 2020**

| State | Awareness & Mouth Self Examination Session | | | |
|---|---|---|---|---|
| | No. of Sessions Conducted | No. of Participants | | |
| | | Dental Officers | Dental Supporting Staffs | Non-Dental Staffs |
| Perlis | 2 | 20 | 32 | 80 |
| Kedah | 9 | 97 | 32 | 31 |
| Penang | 6 | 59 | 16 | 8 |
| Perak | 13 | 116 | 115 | 25 |
| Selangor | 22 | 223 | 70 | 0 |
| FT KL & Putrajaya | 17 | 237 | 369 | 1 |
| Negeri Sembilan | 5 | 57 | 80 | 17 |
| Melaka | 10 | 53 | 74 | 8 |
| Johor | 12 | 143 | 105 | 141 |
| Pahang | 43 | 291 | 317 | 63 |
| Terengganu | 7 | 89 | 76 | 0 |
| Kelantan | 10 | 113 | 193 | 11 |
| FT Labuan | 0 | 0 | 0 | 0 |
| Sabah | 23 | 148 | 169 | 393 |
| Sarawak | 4 | 57 | 36 | 3 |
| **MALAYSIA** | **183** | **1,703** | **1,684** | **781** |

*Source: Oral Health Programme, MOH*

## ORAL HEALTH PROMOTION

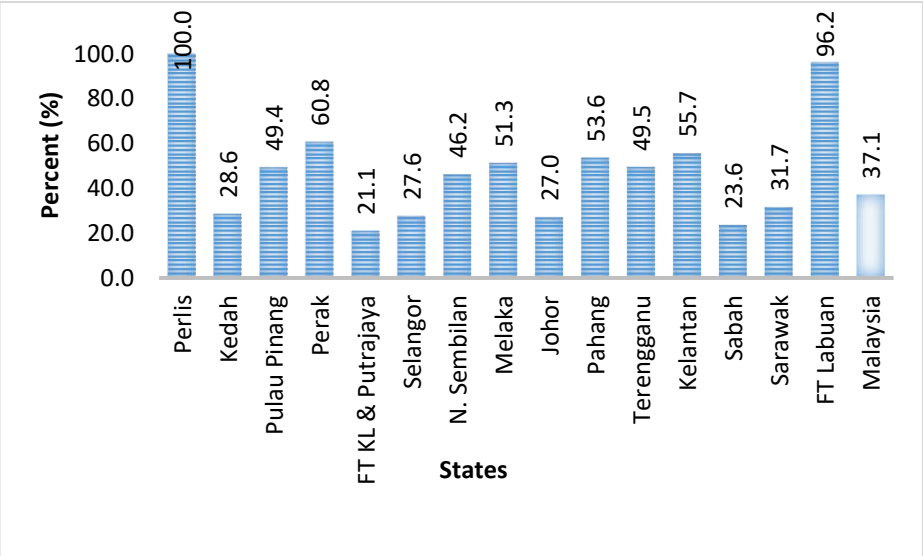
The Oral Health Programme, Ministry of Health Malaysia focuses on oral health promotion activities that aim to enable the *rakyat* to increase control over the determinants of oral health. Activities are mainly directed to increase knowledge and awareness, strengthen the skills and capabilities of individuals and also change social and environmental conditions to improve the oral health status of the population. As we all know, 2020 has been a challenging year for all sectors due to the COVID-19 pandemic that hit the whole country. Various activities involving the public were not allowed due to Movement Control Order (MCO) imposed by the government. Therefore, various activities planned by the Oral Health Promotion Section in 2020 were also disrupted or postponed.

### Tooth Brushing Drill (TBD) And Oral Health Education

Dental plaque is a one of the main risk factors of dental caries and gum diseases. Therefore, it is crucial to inculcate dental plaque control as early as possible to achieve optimal oral health status.

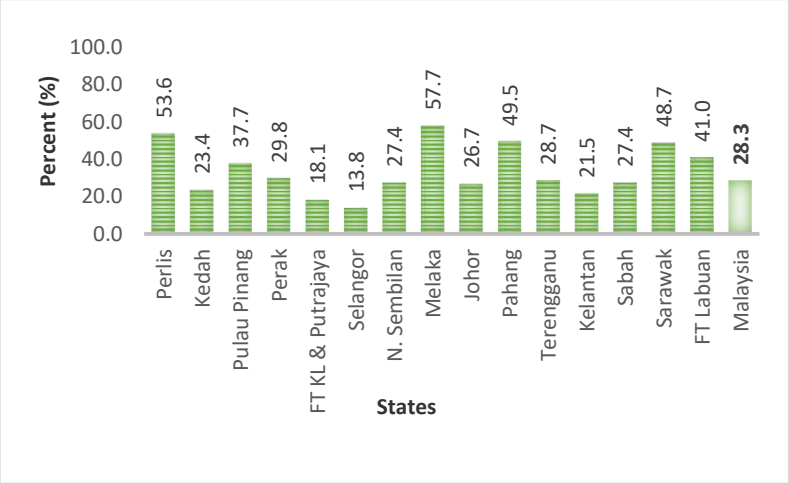
In 2020, 37.1 percent of pre-school children **(Figure 42)** and 28.3 percent of primary schoolchildren **(Figure 43)** participated in tooth brushing drills (TBD). To increase knowledge and awareness, 38.8 percent of pre-school children **(Figure 44)** and 34.9 percent of primary schoolchildren **(Figure 45)** participated in oral health education (OHE) sessions.

**Figure 42:**
**TBD done on Pre-School Children by State, 2020**



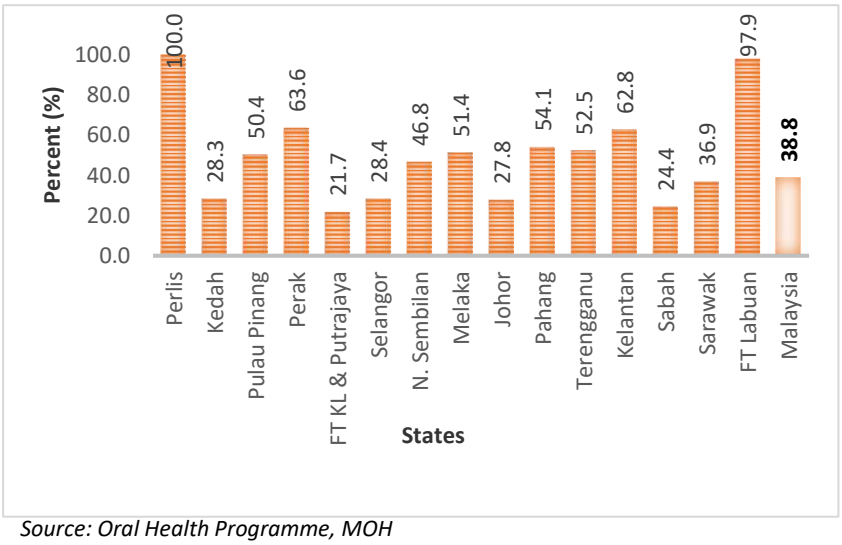

*Source: Oral Health Programme, MOH*

**Figure 43:**
**TBD done on Primary Schoolchildren by State, 2020**



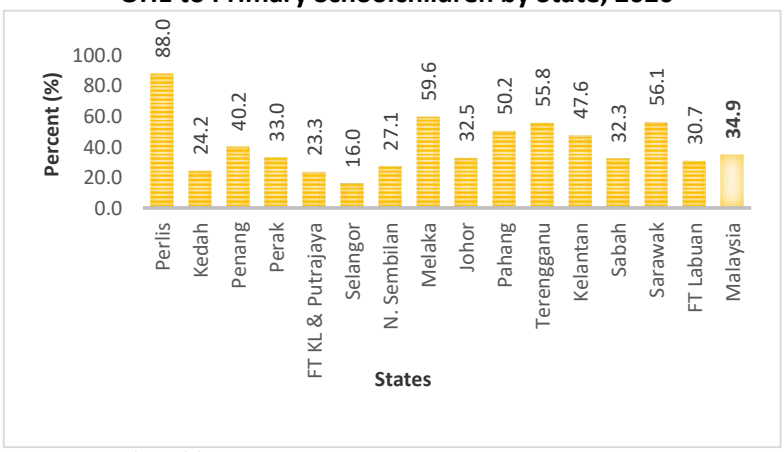

*Source: Oral Health Programme, MOH*

**Figure 44:**
**OHE to Pre-School Children by State, 2020**




*Source: Oral Health Programme, MOH*

**Figure 45:**
**OHE to Primary Schoolchildren by State, 2020**




*Source: Oral Health Programme, MOH*

In 2020, the Standard Operating Procedure (SOP) for *Latihan Memberus Gigi Berkesan* (BEGIN) was produced. This SOP is used to train effective tooth brushing skills to preschool and schoolchildren to ensure dental plaque can be cleaned from all tooth surfaces. This will preserve optimal oral health and further reduce the prevalence of dental caries and gum diseases.

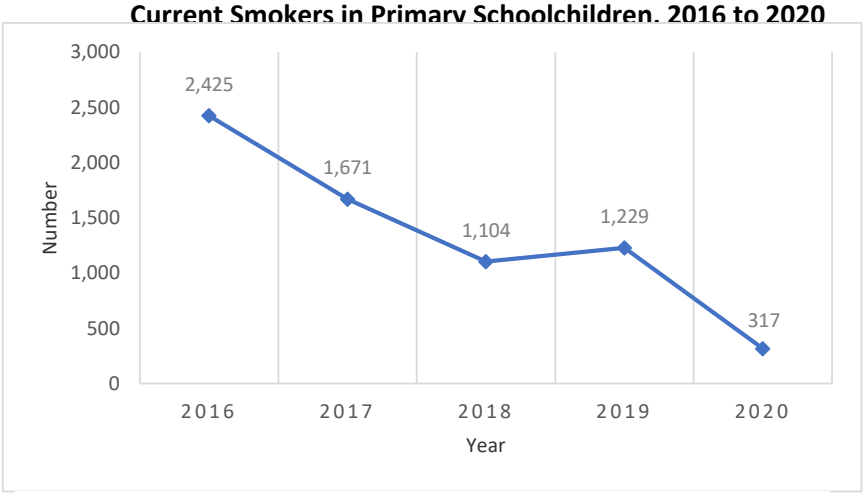
On 2 October 2020, a Training of Trainers (TOT) session of this SOP at the national level was successfully conducted. It was attended by representatives comprising of dental officers and dental therapists from all over the country.

**Image 19 :**
**Standard Operating Procedure (SOP) for *Latihan Memberus Gigi Berkesan* (BEGIN)**


### *Kesihatan Oral Tanpa Amalan Rokok* (KOTAK)

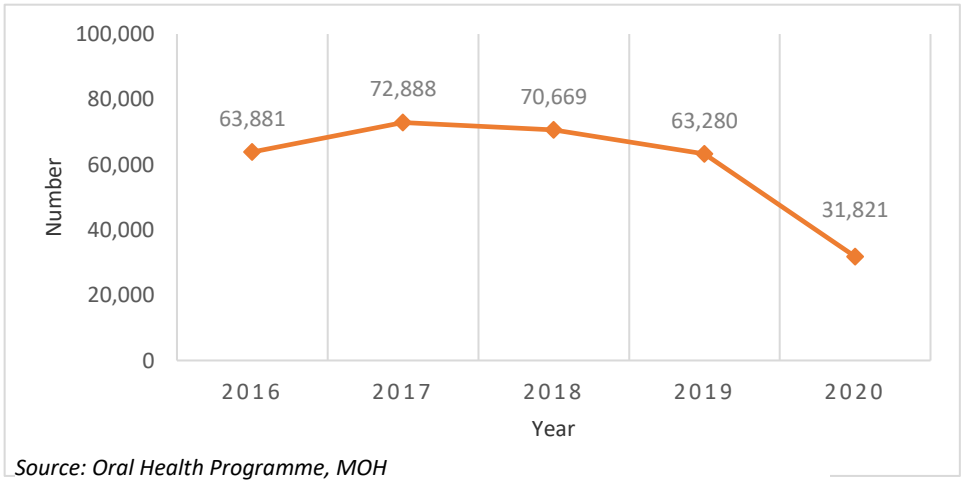
Implementation of KOTAK programme is a collaborative effort between the OHP, the Disease Control Division MoH and the School Education Division of the Ministry of Education. It is part of the School Dental Service programme where all primary and secondary schoolchildren are screened for smoking. Identified smokers will undergo Smoking Intervention to help them quit smoking. In general, there is a decreasing trend of current smokers in primary and secondary schoolchildren from 2016 to 2019. In 2020, the data showed a lower number of current smokers for both primary and secondary schoolchildren. However, these data are not representative as screening could not be conducted for the most part of the year when schools remain closed **(Figure 46 and 47)**.

**Figure 46:**
**Current Smokers in Primary Schoolchildren, 2016 to 2020**




*Source: Oral Health Programme, MOH*

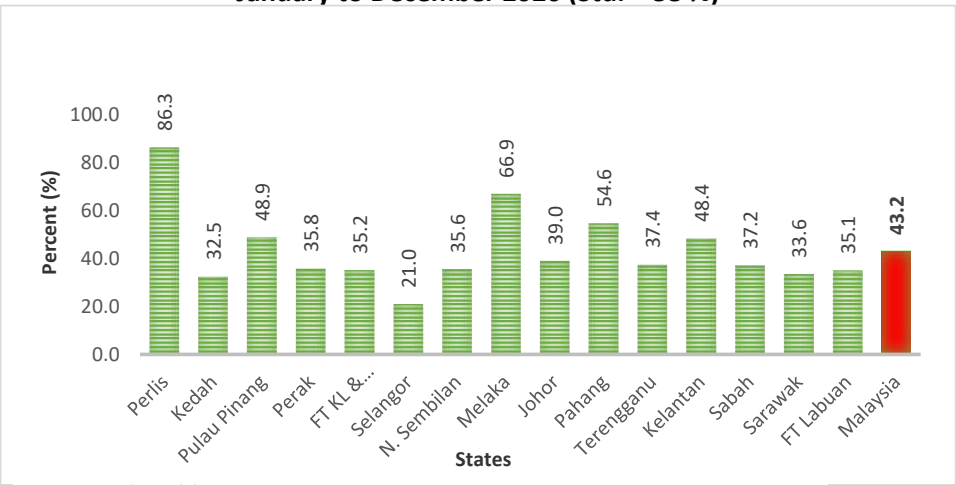
**Figure 47:**
**Current Smokers in Secondary Schoolchildren, 2016 to 2020**




*Source: Oral Health Programme, MOH*

For 2020, the Key Performance Indicator for KOTAK programme is the percentage of school children identified as current smokers who underwent at least three (3) advanced intervention sessions through the KOTAK Programme. In total the average achievement for the current year was 43.2 percent and it did not reach the set standard of 58.0 percent. The highest achievement was in Perlis (86.3 percent) followed by Melaka (66.9 percent) and Pahang (54.6 percent), whereas the lowest was in Selangor (21.0 percent) **(Figure 48).**

**Figure 48:**
**KPI - Percentage of Schoolchildren Identified as Current Smokers Who Underwent at Least Three Advanced Intervention Sessions Through the KOTAK Programme, January to December 2020 (Std. > 58 %)**




*Source: Oral Health Programme, MOH*

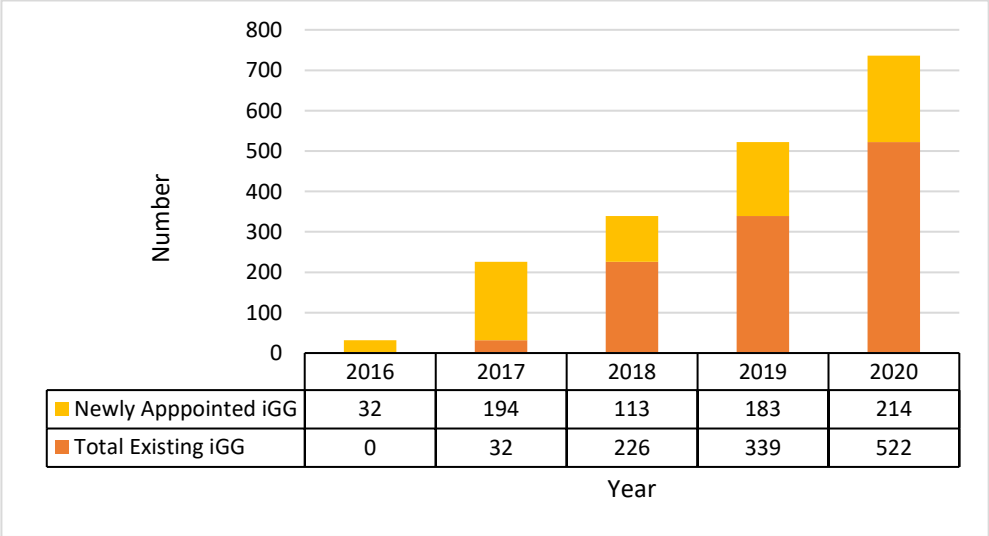
In 2020, the second edition of the *Kesihatan Oral Tanpa Amalan Merokok* (KOTAK) guideline was published. Several items have been improved based on current developments such as definitions, flow chart, training modules, monitoring indicators and reporting format. Training of Trainers (TOT) of all state coordinators for the second edition of KOTAK guideline were conducted via Skype For Bussiness (SFB) online meeting on 28 October 2020.

**Image 20 :**
***Garis Panduan Program Kesihatan Oral Tanpa Amalan Merokok* (KOTAK)**
***Menerusi Perkhidmatan Pergigian Sekolah (Edisi ke-2)***

### *Ikon Gigi Programme (iGG)*

Dental icon is a special programme whereby influential individuals in the community are trained in oral health education modules. The main objective of this initiative is to disseminate oral health information more widely and to empower the community to take action and improve their oral health status. From 2016 to 2020, a total of 736 were dental icons appointed throughout the country **(Figure 49)**.

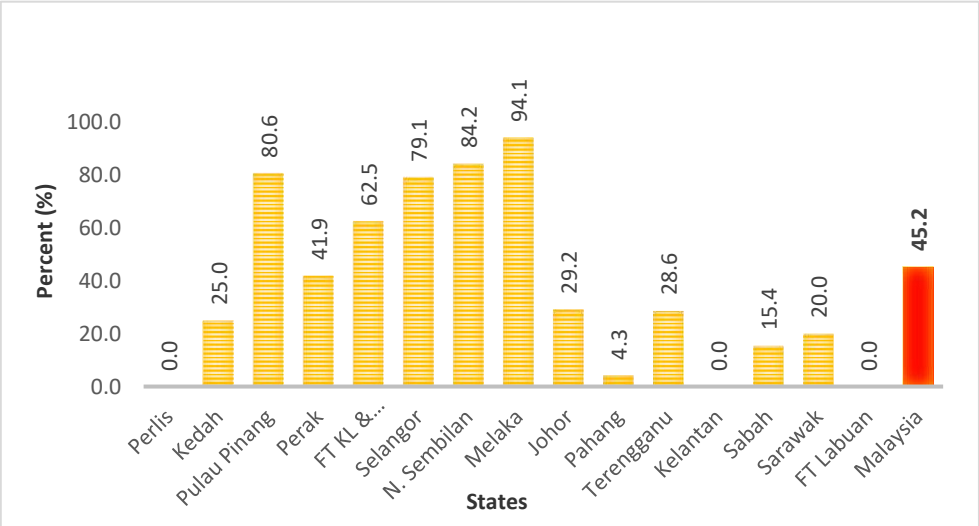
**Figure 49:**
**Number of iGG, 2016 to 2020**




*Source: Oral Health Programme, MOH*

The achievement of Key Performance Indicator for iGG in 2020 was 45.2 percent. Although the overall achievement was above the standard, many iGG in Perlis, Pahang, Kelantan and Federal Territory of Labuan were not able to carry out any activity for at least once a month due to the COVID-19 pandemic **(Figure 50)**.

**Figure 50:**
**KPI - Percentage of Dental Icons Performed Activities at Least Once a Month, January to December 2020 (Std. ≥ 40%)**



*Source: Oral Health Programme, MOH*

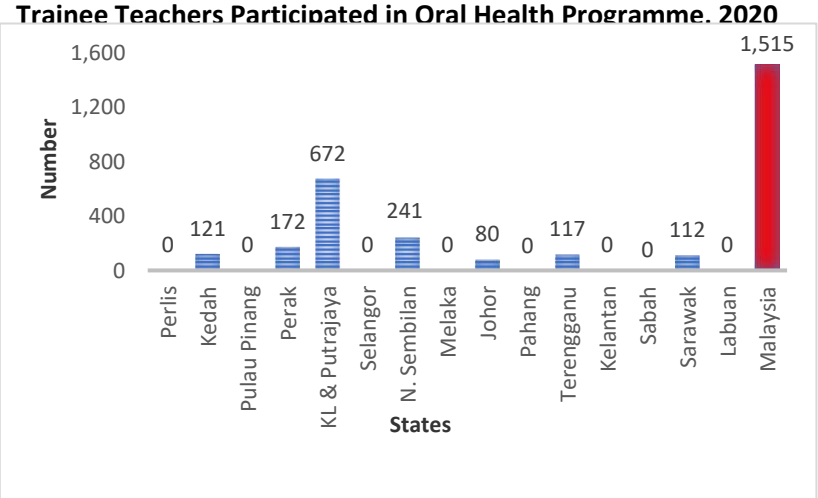
In 2020, two (2) sets of flip charts of *Ikon Gigi* (iGG) modules which consisted of eight (8) scopes were produced as a result of the review of existing iGG modules. Four (4) scopes were improvements from the previous edition while the other four (4) were new scopes i.e. *Trauma Pergigian; Amalan Merokok Dan Kesihatan Mulut; Doktor Gigi Pastikan Yang Ori; and Fakta Vs Auta*.

**Image 21:**
**Set 1 & Set 2 of iGG Module**


## Oral Health Programme for Trainee Teachers

This is one of the oral health promotion initiatives designed for trainee teachers *in Institut Pendidikan Guru Malaysia* (IPGM). The objective is to empower trainee teachers with good oral health practices so that they can be role models and help to improve student's oral health status. In 2020, a total of 1,515 trainee teachers from 11 IPGM, Ministry of Higher Education Malaysia participated in this programme **(Figure 51)**.

**Figure 51:**
**Trainee Teachers Participated in Oral Health Programme, 2020**

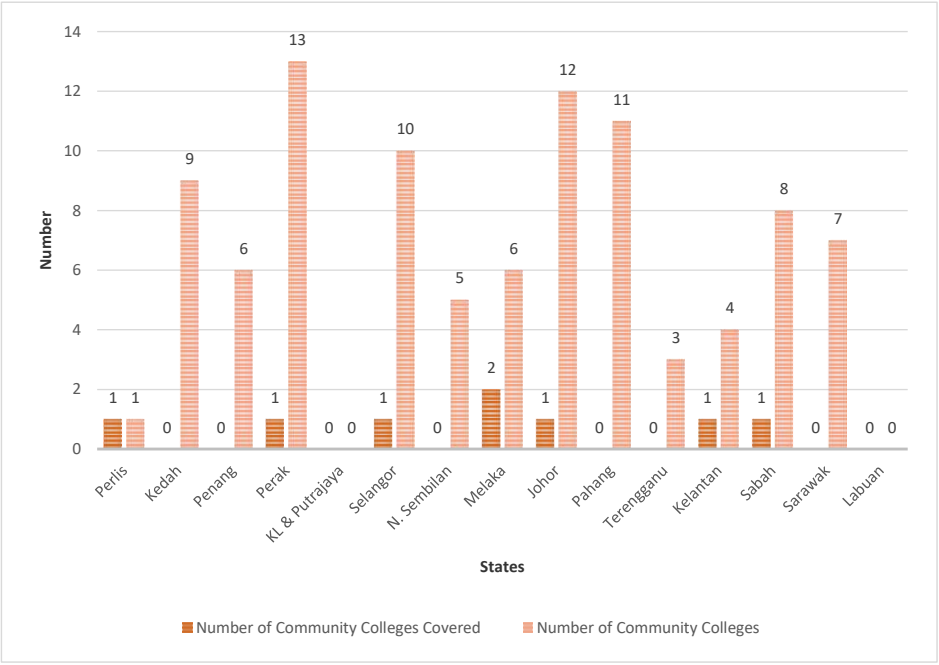



*Source: Oral Health Programme, MOH*

## Transformation With One Smile Together (TWIST)

The Community College Oral Health Programme or also known as Transformation with One Smile Together (TWiST) aims to enhance knowledge and awareness on the importance of oral health among students and sfaff of Community Colleges throughout Malaysia. In 2020, no physical activities were organized due to the COVID-19 pandemic. All community colleges have been ordered to close under the Movement Control Order (MCO) issued by the Malaysian government. However, some states such as Perlis, Perak, Selangor, Melaka, Johor, Kelantan and Sabah have carried out online oral health education activities. In conclusion, the total number of community colleges that have been covered is eight (8) out of 95 (8.5 percent) community colleges in Malaysia. The Federal Territories of Kuala Lumpur, Putrajaya and Labuan do not have community colleges **(Figure 52).**

**Figure 52:**
**Number of Community Colleges Covered in Malaysia, January to December 2020**



*Source: Oral Health Programme, MOH*

## Kolaborasi Oral Dan Agama (KOA)

This programme is a collaborative effort between the OHP MOH and major religious bodies in Malaysia. The objective is to deliver oral health messages through religious activities, increase awareness and inculcate good oral health practices among the believers. Oral health messages were also delivered through religious activities such as *Khutbah Jumaat*. In 2020, a total of 359 activities from various religions were conducted **(Table 88).**

**Table 88:**
**Activities and Participants Participated in KOA Programme, 2020**

| No. | Religious Body | Total Activities | Total Participants |
|---|---|---|---|
| 1 | Islam | 87 | 5,016 |
| 2 | Buddha | 17 | 257 |
| 3 | Hindu | 5 | 139 |
| 4 | Kristian | 233 | 784 |
| 5 | Others | 17 | 764 |
| **Total** | | **359** | **6,960** |

*Source: Oral Health Programme, MOH*

## Oral Health Promotion Week

Oral Health Promotion Week is a new initiative by Oral Health Programme with the aim to increase awareness to public on oral healthcare through promotional activities. For 2020, Oral Health Programme, MOH has created its own history by organising the first virtual launching of Oral Health Promotion Week on 19 August 2020 using Facebook Live platform. The grand virtual launching event with the theme *Norma Baharu, Senyuman Baharu* was officiated by the Principal Director of Oral Health, Ministry of Health Malaysia. Terengganu Oral Health Division as the co-organiser for this year's event contributed in technical aspect of the virtual-stage set up. At the national level, pre-launched activities such as instavideo and infographic competitions had received tremendous participations from all over the country. Meanwhile, at state level, various promotional activities continued for the whole week after the launching.

**Image 22, 23, 24, 25:**
**Virtual launching of Oral Health Promotion Week on 19 August 2020**

In conclusion, a total of 20,832 activities were carried out involving 146,813 participants during the 2020 Oral Health Promotion Week held nationwide **(Table 89)**.

**Table 89:**
**Activities and Participants Participated in**
**Oral Health Promotion Week by States, 2020**

| No. | States | Total Activities | Total Participants |
|---|---|---|---|
| 1 | Perlis | 199 | 2,964 |
| 2 | Kedah | 1,385 | 7,380 |
| 3 | Pulau Pinang | 1,337 | 9,298 |
| 4 | PPKK & ILKKM | 34 | 1,124 |
| 5 | Perak | 4,388 | 25,316 |
| 6 | Selangor | 2,146 | 19,012 |
| 7 | FT KL & Putrajaya | 364 | 9,747 |
| 8 | Negeri Sembilan | 1,413 | 6,269 |
| 9 | Melaka | 303 | 4,979 |
| 10 | Johor | 1,214 | 7,276 |
| 11 | Pahang | 1,287 | 12,075 |
| 12 | Terengganu | 1,553 | 10,246 |
| 13 | Kelantan | 997 | 6,845 |
| 14 | Sabah | 2,278 | 15,775 |
| 15 | Sarawak | 1,432 | 6,418 |
| 16 | FT Labuan | 502 | 1,693 |
| **Total** | | **20,832** | **146,813** |

*Source: Oral Health Programme, MOH*

## Strengthening Usage and Control of Social Media for Dissemination of Oral Health Information

In March 2020, during the early phase of Movement Control Order (MCO), a special infographic team comprising of dental officers was formed to help develop infographic regarding the COVID-19 pandemic and oral health services. The infographics were uploaded in Oral Health Programme official social media such as Facebook, Instagram, Twitter and have been widely disseminated among the community and have also gained positive responses due to its up-to-date informations. In addition, an official team comprising of co-administrators and content developers were established to strengthen the management of the social media. The highlight of this year was the creation of an official Twitter page for OHP with the objectives to expand and diversify the medium of information dissemination to the community.

**Image 26:**
**Infographics regarding the COVID-19 pandemic and oral health services**


## On-line Oral Health Education (PKPDT)

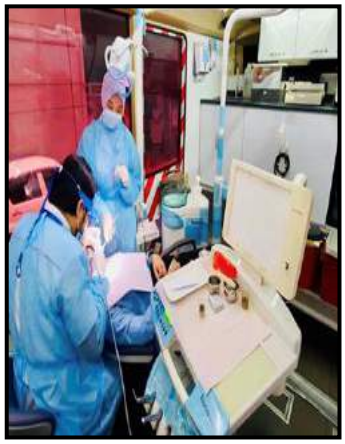
The COVID-19 pandemic has transformed the landscape of education in Malaysia. Thus, online platform has become the most appropriate method for teaching and learning during the pandemic. Oral Health Programme, MoH has taken the opportunity to explore *PKPDT* as a potential method to ensure that oral health education can still be delivered to schoolchildren during school closures. A trial-run session of *PKPDT* was conducted in selected schools in four (4) states namely Penang, Perak, Terengganu and The Federal Territory of Kuala Lumpur and Putrajaya throughout the whole month of December 2020. A total of 180 pre-school children, 10,720 primary schoolchildren and 1,481 secondary schoolchildren participated in this trial-run session.

## World Oral Health Day (WOHD) 2020

This year has marked a great start for WOHD celebration. Highlights of activities include several oral health talks with popular mass media stakeholders such as Media Prima Berhad in *Malaysia Hari Ini* slot for TV3, *Selamat Pagi Malaysia* for RTM and health talk at IKIM.fm radio. Other activities includes community programme such as dental exhibition and check-up at *Projek Perumahan Rakyat* (PPR). The closing ceremony was organised by the Malaysian Dental Association (MDA) on 19 September 2020 and attended by several collaborators. A photography competition which was held in conjunction with this year's theme 'Say Ahh, Unite for Mouth Health' has received overwhelming responses from both the public and private sectors.

**Image 27, 28, 29, 30:**
**World Oral Health Day (WOHD) 2020 Celebration**







## Oral Health Education Materials

Four (4) existing posters, sized 20” x 30”, were redesigned, printed and distributed to the states:

a. *Nasihat Selepas Cabutan*
b. *Penyakit Pergigian Murid Sekolah*
c. *Penyakit Pergigian Kanak-Kanak*
d. *Masalah Gigi Tidak Teratur*

Three (3) new posters, sized 20” x 30”, were designed, printed and distributed to the states:

a. *Sentiasa Amalkan Penjarakan Fizikal*
b. *Pemeriksaan Mulut Sendiri*
c. Practice 3W (*Amalkan*) , Avoid 3C (*Elakkan*)

# ACTIVITIES AND ACHIEVEMENTS

## Oral Health Practice and Development Division

# ORAL HEALTH ACCREDITATION AND GLOBALISATION

## Accreditation of Undergraduate Dental Degree Programme

- **Full Accreditation (Renewal)**

In 2020, four full accreditation evaluation were scheduled for Dental Undergraduates Programs that had accreditation status expiring in 2020.

- Islamic Science University of Malaysia (*University Sains Islam Malaysia,* USIM)
- International Medical University (IMU)
- Lincoln University College (LUC)
- International Islamic University Malaysia (IIUM)

Of the four assessments planned, only three were carried out where the evaluation visit on IIUM's undergraduate dental surgery program had to be postponed several times due to the enforcement of the Movement Control Order. The evaluation visit to the programme has been rescheduled in early 2021.
The accreditation visit to USIM was carried out on 11 to 12 February 2020, IMU was assessed on 29 to 30 June 2020 whilst LUC was visited on 27 to 28 July 2020.

- **Accreditation Compliance Monitoring Visits**

Three compliance monitoring evaluations were scheduled for Dental Undergraduates programs to the following Higher Education Providers (HPE):

- Asian Institute of Medicine, Science and Technology (AIMST)
- University of Science, Malaysia (USM)
- SEGi University

Of the three (3) visits scheduled, only assessment of AIMST University BDS programme was carried out on the 5 February 2020. The evaluation for USM and SEGi University programme had to be rescheduled several times and eventually the assessment had to be postponed to 2021.

- **Evaluation for increase intake applications**

Applications for the increase in student intake quota were received from IMU and USIM. Changes in the quota were requested primarily due to the pandemic affecting the intake of international students.

- **Curriculum Review**

A total of two (2) panel reports for curriculum review were presented and approved, namely for *Universiti Kebangsaan Malaysia* (UKM) and IMU. The desktop assessments of the reviewed curriculum of the two (2) universities were done by their respective panel of assessors appointed by the Joint Technical Accreditation Committee (JTAC).

- **Joint Technical Accreditation Committee (JTAC)**

Effective 2 April 2020, Dr Noormi binti Othman, as the new Principal Director of Oral Health assumed the role as chairperson of the JTAC, following the retirement of *YBrs.* Dr Doreyat bin Jemun, former Principal Director of Oral Health.

Only five (5) of the six (6) JTAC meetings planned for 2020 could be held due to the spread of the COVID-19 pandemic. The fifth meeting of the year was held virtually following the implementation of the Conditional Movement Control Order (CMCO) in some states. A total of 12 Malaysian Dental Council (MDC) decision papers were extended to the Malaysian Qualifications Agency (MQA) from the five (5) meetings held.

| JTAC MEETINGS | DATE | DECISION PAPERS |
|---|---|---|
| No 1 / 2020 | 7 January 2020 | 1 |
| No 2 / 2020 | 28 February 2020 | 3 |
| No 3 /2020 | 14 July 2020 | 3 |
| No 4 / 2020 | 15 September 2020 | 2 |
| No 5 / 2020 | 9 November 2020 | 3 |

- **Moratorium on Bachelor of Dental Surgery Programme**

The moratorium on the establishment of new dental faculty, moratorium for offering Bachelor of Dental Surgery Programme or equivalent and intake limitation of local students to a total of 800 students a year was enforced from 1 March 2013 to 28 February 2018.
Despite efforts by the Oral Health Programme as from 2016, the moratorium has yet to be renewed. In 2020, the Higher Education Department, suggested that MOH gathered new data to review the need for the moratorium. Data available were updated but all scheduled meetings to decide on the status of the moratorium were hampered during the Movement Control Order period. The status of this moratorium was still pending official decision until the end of 2020.

- **Assessment Rubric for Accreditation of Undergraduate Dental Degree Programme**

During the JTAC No 2/2019 meeting, the committee agreed that the "rating system" then needed to be updated before the revision of the COPPA for Dental Undergraduate Program commenced. Henceforth, the Rating System Committee started the process of reviewing the Rating System for the Accreditation of Undergraduate Dental Degree Programme. The reviewed version was put to test during several assessment visits in 2020.

The revised version was renamed the Assessment Rubric for the Accreditation of Undergraduate Dental Degree Programme and presented at JTAC meeting No 5/2020 on 9 November 2020 and decision was sent to the MDC for approval.

## Attachment At Ministry of Health Facilities For Dental Undergraduates And Postgraduates

The attachments as part of the training of both undergraduate and postgraduate students were processed by the section. All applications from the higher education providers (HEP) were presented to the *Jawatankuasa Penggunaan Fasiliti (JKPF)* which was chaired by the Deputy Director General (Medical). All attachment applications were discussed with the committee to ensure that they do not cause congestion at the MOH facilities involved. Apart from attachment of dental students, MoH facilities are also used for training medical, pharmacy, nurses and allied health students. In ensuring MOH's interest, Memorandum of Agreements are signed with the HEP requesting the use of MOH facilities for training. The meetings are held every three (3) months.

- **Signing / renewing Memorandum of Agreement (MoA) for Dental Undergraduate Programme**

A total of five (5) MoAs have been successfully signed with three (3) public Higher Education Providers (HEP) (Universiti Sains Malaysia (USM), Universiti Kebangsaan Malaysia (UKM) and Universiti Malaya (UM) and one renewed MoA for private HEP namely with MAHSA. Two (2) MoAs with UiTM and Lincoln University College are still in process.

- **Utilization of MoH facility for Training of Undergraduates Dental Students**

A total of four (4) applications have been received and processed, namely from MMMC, SEGi, MAHSA and also UiTM.

- **Utilization of MoH facility for Training of Postgraduates Dental Students**

A total of 18 applications from various local universities were received and processed in 2020, for attachment of postgraduate students at Oral Health Specialist Clinics / department involving the areas of specialty in Oral and Maxillofacial Surgery, Orthodontics, Paediatric Dentistry, Pathology and Oral Medicine and Public Health Dentistry. These were mostly mandatory training for the postgraduates. Applications were from both dental and medical faculties (Otorhinolaryngology students). There have been a number of postponement and change of placement location following the COVID-19 pandemic.

## Globalisation And Liberalization Of Oral Health Services

- **ASEAN Joint Coordinating Committee On Dental Practitioner (AJCCD)**:

The Deputy Director of the section together with the Secretary of the Malaysian Dental Council (MDC) represents the ASEAN Joint Technical Committee (AJCCD) Malaysia and for the year 2020 attended two AJCCD meetings on 4 to 6 March 2020 which was held in Vietnam and 24 November 2020 which was held virtually.

- **Provide feedback on matters related to the liberalization of dental services as follows:**

  i. Mid-term review for AEC Blueprint 2025

  ii. ERIA – input on an inception report on a study “Enhancing the Utilisation of ASEAN MRAs with regards to cross-border mobility of professionals”

  iii. Input to MITI – Malaysia’s readiness for MRA with India under MICECA

## ORAL HEALTH LEGISLATION AND ENFORCEMENT

### Drafting of Dental Regulation

The Draft Dental Regulations is in stages for final review by the Drafting Division, Attorney General's Chambers. A joint meeting with the Drafting Division was held on 14 September 2020 and required some amendments related to registration forms and fees. Subsequently, a few discussions via e-mail were conducted to ensure that the draft will be completed as expected.

### Guidelines Review

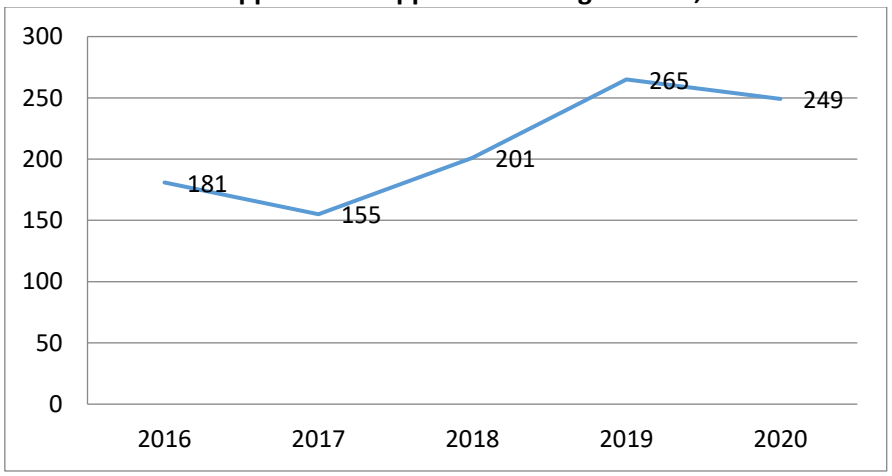
Several guidelines have been updated and reviewed in 2020 as follows:

- Guidelines and Provisions For Public Information 2014
- Guidelines of Infection Control in Dental Practice

### New Registration of Private Dental Clinics (PDCs)

Registration of PDCs started in 1 May 2006 after Act 586 came into force. During that year, 809 applications were received and only 16.2 percent (131) dental clinics were successfully registered. By 2009, all PDCs which had submitted complete applications were registered with Ministry of Health. This brought the total number of registered PDC to 1537. Every year the number of applications received for registration of PDC is increases. The number of registrations of new PDCs in the period of five (5) years are as shown in **Figure 53.**

**Figure 53**:
**Number of PDC Applications Approved for Registration, 2016 to 2020**

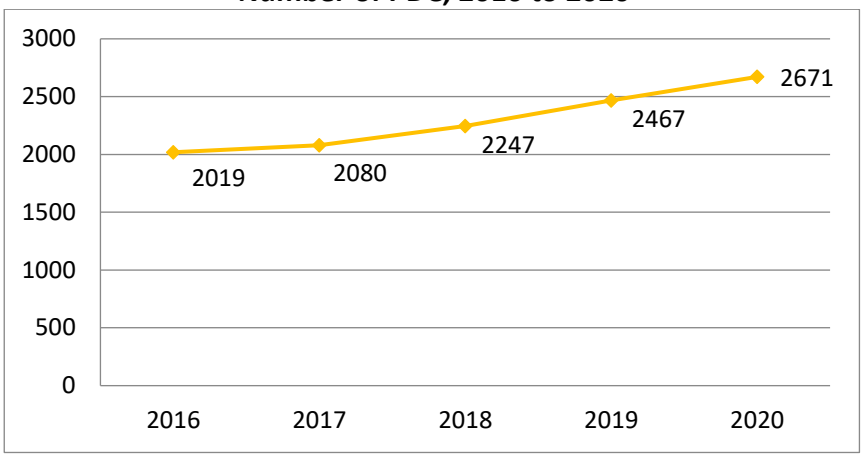



*Source: Oral Health Programme, MOH*

In 2020, the number of PDC approved decreased slightly, compared to 2019. This drop is mainly attributed to the COVID-19 pandemic. The number of new application for PDC registration also decreased compared to 2019 where 332 applications were received in 2019 compared to 2020 whereby only 277 applications were received.

Although the number of new PDC registrations declined, the number of PDCs registered with MOH continued to increase (**Figure 54**).

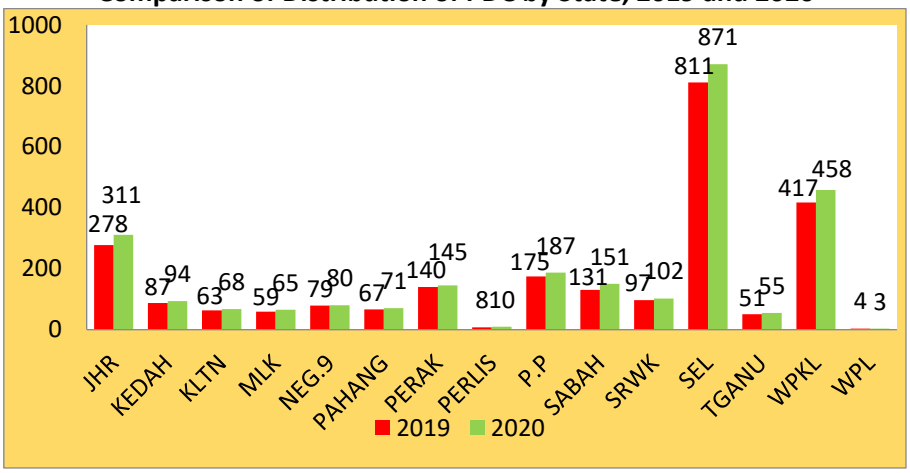
**Figure 54**:
**Number of PDC, 2016 to 2020**




*Source: Oral Health Programme, MOH*

**Figure 55** shows distribution of PDC by state in 2019 and 2020. Only the Federal Territory of Labuan showed a decrease in the number of registered PDC in 2020.

**Figure 55:**
**Comparison of Distribution of PDC by State, 2019 and 2020**



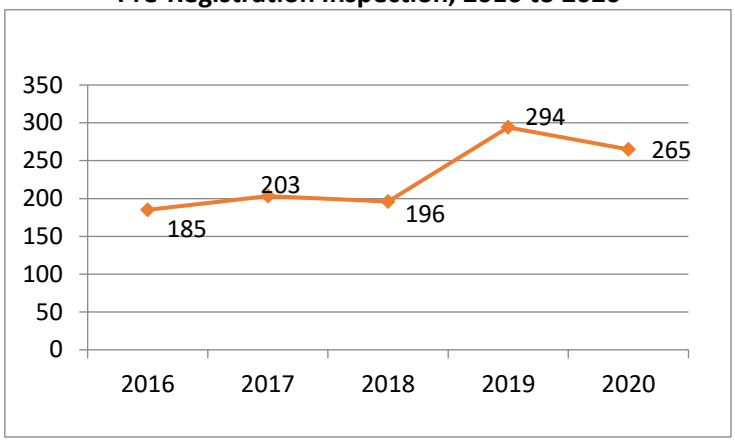

*Source: Oral Health Programme, MOH*

## Pre-Registration Inspection

This inspection is carried out upon notification received of completion of renovation from the owner of the registration certificate or the person in charge of the premises to be registered. Pre-registration inspection shall be conducted within seven (7) working days after receiving the notification.

There was a decrease in pre-registration inspection conducted in 2020. This is due to the decline of registration applications received and the number of new PDC in 2020 **(Figure 56).**

**Figure 56:**
**Pre-Registration Inspection, 2016 to 2020**

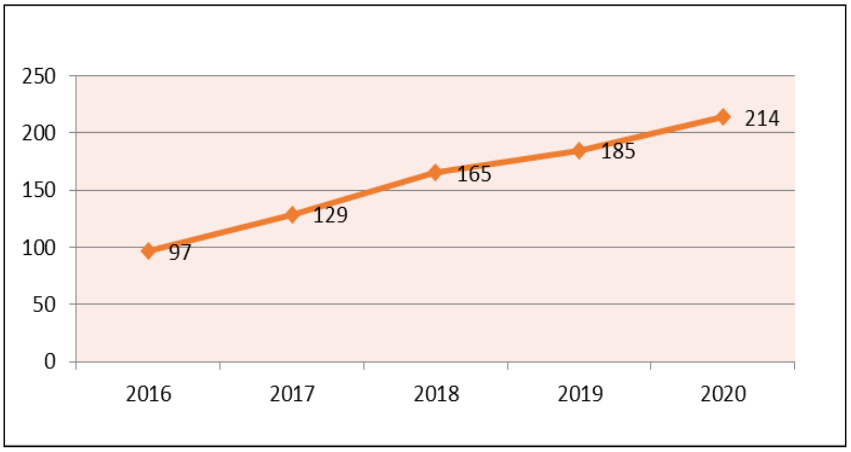



*Source: Oral Health Programme, MOH*

## Post-Registration Inspection

Post-registration inspection activities are carried out after the PIC receives the Certificate of Registration (Form C). The number of activities conducted from 2016 to 2020 is as shown in **Figure 57.**

**Figure 57:**
**Post Registration Inspection Activities, 2016 to 2020**

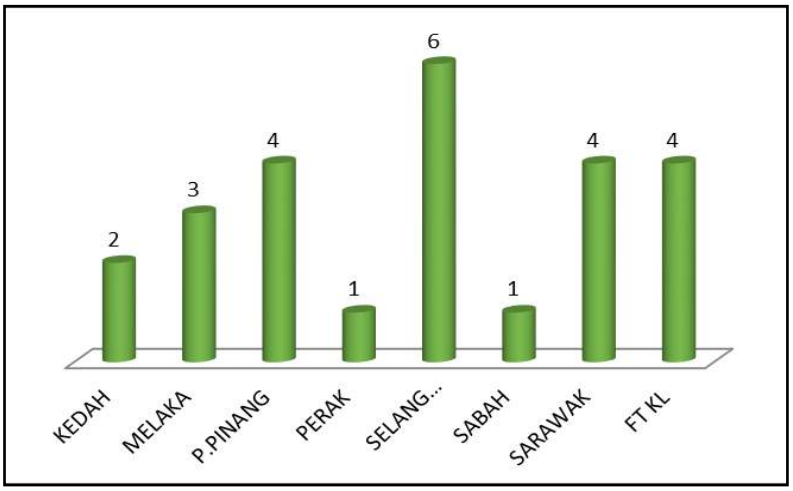



*Source: Oral Health Programme, MOH*

## Licensing of Private Hospitals And Ambulatory Centers With Dental Components

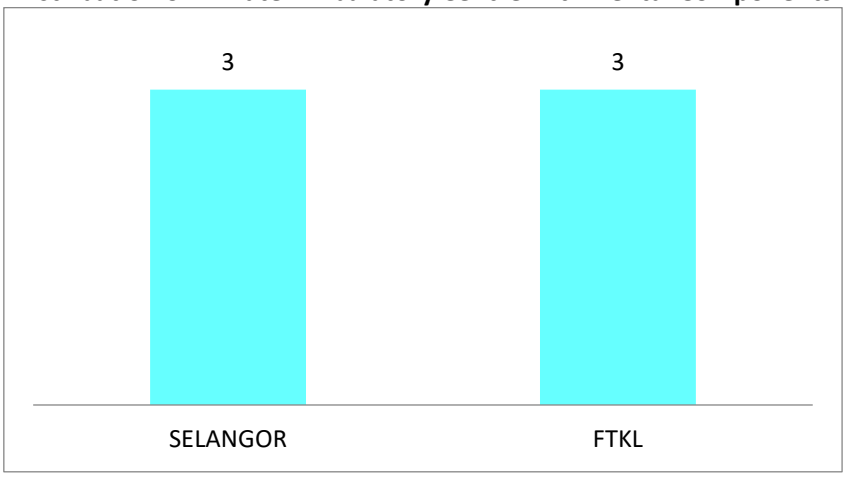
Legislation and Enforcement Division is also involved in the review of the floor plan for hospital and private ambulatory center with dental components. As of 31 December 2020, there were 25 private hospitals and six (6) private ambulatory centers with dental components as shown in **Figure 58** and **59**. No new license applications was approved in 2020.

**Figure 58:**
**Distribution of Private Hospitals with Dental Components**




*Source: Oral Health Programme, MOH*

**Figure 59:**
**Distribution of Private Ambulatory Centre with Dental Components**



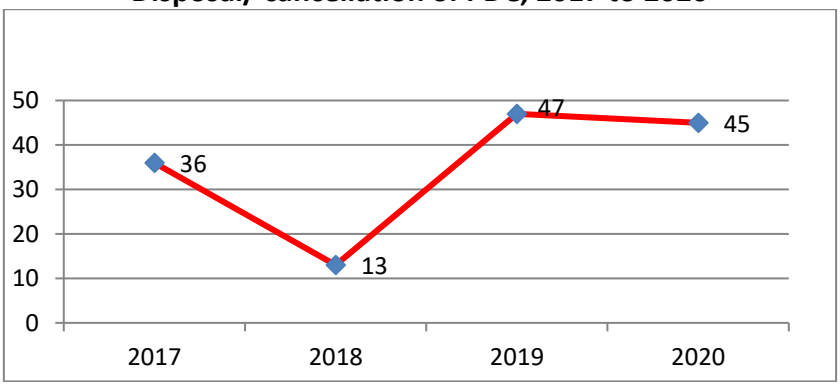

*Source: Oral Health Programme, MOH*

## Disposal/ Cancellation/ Withdrawal of Private Dental Clinic Registration

The division also handles the disposal process, closure of dental clinics or withdrawal of registration application by the PIC or by the owner of the registration certificate or registration applicant. At the state / Federal Territory level, verification inspection will be done after receiving notification from the Private Medical Practice Control Division Headquarters (HQ).

Figure **60** shows the trend of disposal/ cancellation of PDC starting year 2017. In 2020, the number of disposal/ cancellation of PDC decreased by 4.2 percent from 47 PDCs in 2019 to 45 in 2020.

**Figure 60:**
**Disposal/ cancellation of PDC, 2017 to 2020**




*Source: Oral Health Programme, MOH*

## Monitoring Inspection of Private Dental Clinics

Monitoring inspection is a mechanism to ensure that all PDC comply to the Acts and Regulations related. Inspection is carried out according to the set targets. In 2020, the targets are as shown in **Table 90**. The performance of monitoring inspections by states are shown in **Table 91** and the trend of performance from 2016 to 2020 is as in **Figure 61**.

**Table 90:**
**Monitoring Targets, 2020**

| Total of Private Dental Clinics | Targets of Monitoring (%) | States Involved |
|---|---|---|
| ≤ 80 | 100 | Kelantan, Melaka, Negeri Sembilan, Perlis, Pahang, Terengganu, Kelantan, FT Labuan |
| 81-200 | 50 | Kedah, Perak, Penang, Sabah, Sarawak |
| 201- 250 | 40 | - |
| ≥ 251 | 33.3 | Johor, Selangor, FT Kuala Lumpur & Putrajaya |

*Source: Oral Health Programme, MOH*

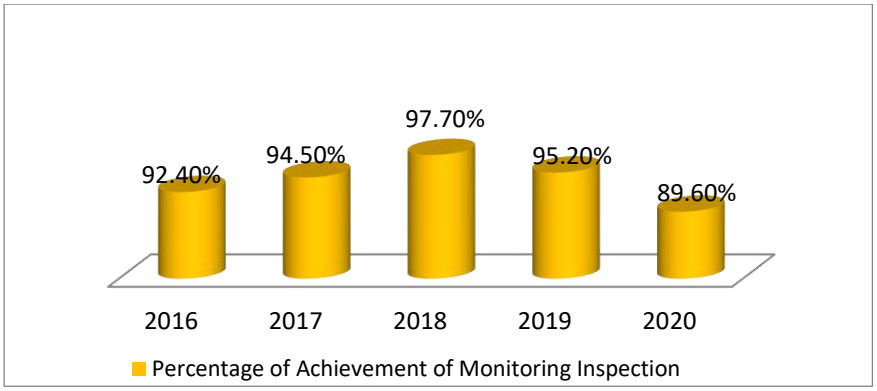
**Table 91**:
**Monitoring Inspection Achievements by States for 2020**

| No. | State | Number of Private Dental Clinics | | | | |
|---|---|---|---|---|---|---|
| | | No. on 1 Jan 2020 | Target (%) | Target (No) | Achievement (No) | Achievement (%) |
| **1.** | Johor | 278 | 33.3 | 93 | 93 | 100 |
| **2.** | Kedah | 87 | 50 | 44 | 44 | 100 |
| **3.** | Kelantan | 63 | 100 | 63 | 26 | 41.3 |
| **4.** | Melaka | 59 | 100 | 59 | 58 | 98.3 |
| **5.** | Negeri Sembilan | 79 | 100 | 79 | 79 | 100 |
| **6.** | Pahang | 67 | 100 | 67 | 67 | 100 |
| **7.** | Perak | 140 | 50 | 70 | 70 | 100 |
| **8.** | Perlis | 8 | 100 | 8 | 8 | 100 |
| **9.** | Pulau Pinang | 175 | 50 | 88 | 88 | 100 |
| **10.** | Sabah | 131 | 50 | 66 | 40 | 60.6 |
| **11.** | Sarawak | 97 | 50 | 49 | 28 | 57.1 |
| **12.** | Selangor | 811 | 33.3 | 268 | 234 | 87.3 |
| **13.** | Terengganu | 51 | 100 | 51 | 51 | 100 |
| **14.** | FT KL & Putrajaya | 417 | 33.3 | 139 | 139 | 100 |
| **15.** | FT Labuan | 4 | 100 | 4 | 4 | 100 |
| | **Total** | **2467** | | **1148** | **1029** | **89.6** |

*Source: Oral Health Programme, MOH*

The overall target set for monitoring inspection is 95 percent of the identified private dental clinics. Referring to Table 88, five (5) states did not achieved the target of monitoring inspection (Kelantan, Melaka, Sabah, Sarawak and Selangor) with the overall achievement of only 89.6 percent. This achievement was slightly lower compared in the year 2019. The main cause identified was the control of movement due to the COVID-19 pandemic that hit the country throughout 2020.

**Figure 61**:
**Achievement of Monitoring Inspection, 2016 to 2020**

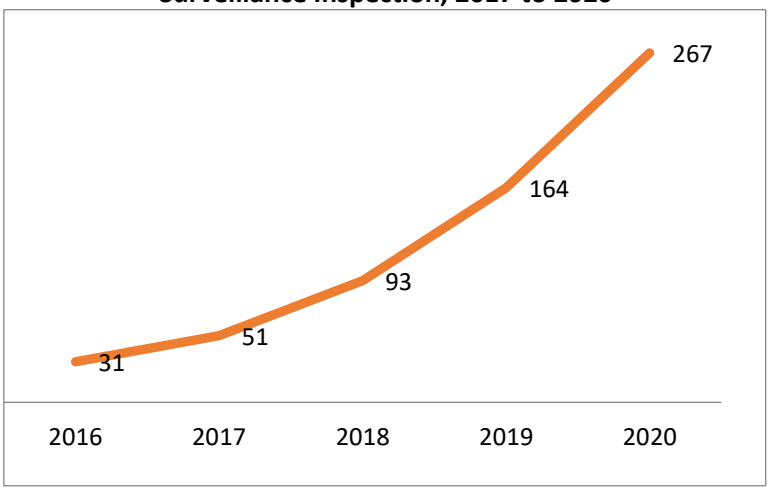



*Source: Oral Health Programme, MOH*

## Surveillance Inspection of Private Dental Clinics

Surveillance inspections were conducted on PDC which do not comply with Act 586 and its Regulations during pre-registration, post-registration and monitoring inspections. A surveillance visit is carried out after the specified time given though non-compliance notice issued during those inspection. The upward trend of the surveillance inspections conducted is shown in **Figure 62**.

**Figure 62:**
**Surveillance Inspection, 2017 to 2020**




*Source: Oral Health Programme, MOH*

The number of compliance inspections conducted in 2020 increased and was in line with the trend of improvement over the last five (5) years. Yet, this achievement is still low compared to the number of non-compliance notices issued where the percentage of compliance achievement was 33.8 percent (267/790). However, the overall achievement has improved compared to 2019, where the compliance achievement was only 10.5 percent.

## Verification Inspection

The verification inspection activities were recorded in 2020 to measure the workload of enforcement dental officers. This verification inspection is conducted for the following purposes:

- disposal/ cancellation of PDC registration
- floor plan renovation

Verification inspection is carried out after receiving notification or instruction letter from the Private Medical Practice Control Division HQ. In 2020, 67 verification inspections were conducted by states as shown in **Table 92**.

**Table 92:**
**Verification Inspection, 2020**

| No. | State | No. of Verification Inspection | |
|---|---|---|---|
| | | Disposal of PDC | Floor Plan Renovation |
| 1. | Johor | 4 | 2 |
| 2. | Kedah | 1 | 5 |
| 3. | Kelantan | 1 | 0 |
| 4. | Melaka | 0 | 1 |
| 5. | Negeri Sembilan | 4 | 1 |
| 6. | Pahang | 0 | 0 |
| 7. | Perak | 2 | 3 |
| 8. | Perlis | 0 | 1 |
| 9. | Penang | 0 | 1 |

| No. | State | No. of Verification Inspection | |
|---|---|---|---|
| | | Disposal of PDC | Floor Plan Renovation |
| 10. | Sabah | 0 | 0 |
| 12. | Sarawak | 4 | 5 |
| 11. | Selangor | 9 | 10 |
| 13. | Terengganu | 0 | 0 |
| 14. | FT Kuala Lumpur & Putrajaya | 10 | 3 |
| 15. | FT Labuan | 0 | 0 |
| | **Total** | **35** | **32** |

*Source: Oral Health Programme, MOH*

## Raiding Activities

Raiding activities are conducted when there are contravenes of the Act 586 during monitoring of PDC or complaints/ information received from public regarding illegal practice / practitioner.

In 2020, four (4) raiding activities were conducted involving unregistered dental clinics suspected of contravening subsection 4 (1) of the Act 586.

**Table 93**:
**Raiding Activities, 2020**

| States | No. | Type of Premises | Reason of Enforcement Activities | Action Taken | | STATUS |
|---|---|---|---|---|---|---|
| | | | | Date | Action | |
| Johor | 1 | Private dental clinics | Working without APC | 9/8/2020 | raid | In process of preparing IP |
| Kedah | 2 | Private dental clinics | Working without APC | 24/2/2020 | raid | In process of preparing IP |
| | 3 | Private dental clinics | Breach Code of Professional Conduct | 29/7/2020 | raid | IP sent to CKAPS HQ |
| Negeri Sembilan | 4 | Unregistered dental clinic | Provide unregistered dental clinic | 23/1/2020 | raid | IP sent to CKAPS HQ |
| Sarawak | 5 | Private dental clinics | No Specialists On Duty During Clinic Operations | 17/8/2020 | raid | No Further Action |
| | 6 | Unregistered dental clinic | Provide unregistered private dental clinic | 23/9/2020 | raid | In process of preparing IP |
| Selangor | 7 | Private dental clinics | Non-compliance with Act 586 | 17/12/2020 | raid | In process of preparing compounding IP |
| FT Kl & Putrajaya | 8 | Unregistered dental clinic | Establish and maintain private dental clinic | 19/2/2020 | raid | No Further Action |
| | 9 | Unregistered dental clinic | Establish and maintain private dental clinic | 29/2/2020 | raid | In process of preparing IP |
| PERAK | 10 | Private dental clinics | Locum without APC | 16/11/2020 | Clinic ordered to closed | Report sent to CKAPS HQ |
| | 11 | Private dental clinics | Locum without APC | 16/11/2020 | D.O was asked to stop treatment | Report sent to CKAPS HQ |

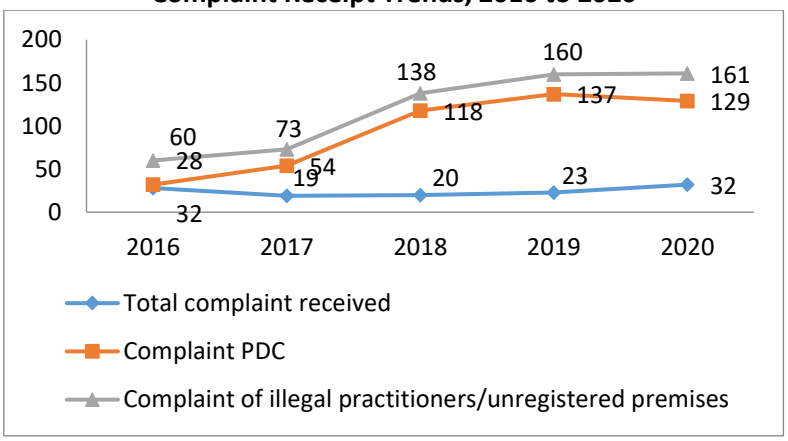
*Source: Oral Health Programme, MOH*

## Complaints Management

Starting 1 January 2020, The Standard Operating Procedures for Complaint Management under Act 804 were distributed to all the State Oral Health Divisions for trial run. The collection of information/ data related to complaints should be submitted to Legislation and Enforcement Section for every three (3) months.

In 2020, a total of 161 complaints were received of which 32 complaints were related to PDC and 129 complaints related to illegal dental practices. 80 of percent complaints received were related to illegal practitioners or unregistered premises while 20 percent were towards PDCs. Overall the number of complaints received increase every year **(Figure 63)**.

**Figure 63:**
**Complaint Receipt Trends, 2016 to 2020**

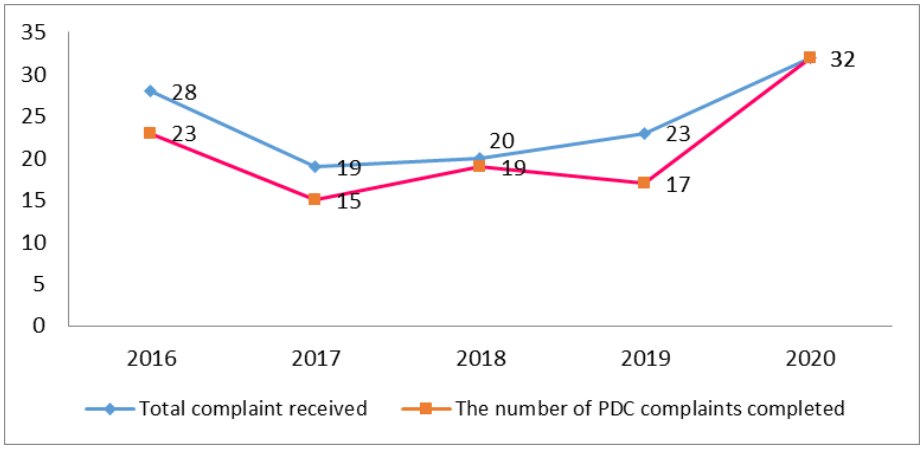



*Source: Oral Health Programme, MOH*

- **Complaints Against Private Dental Clinics**

The trend of complaints against private dental clinics is shown in **Figure 64**. In 2020, there was 39.1 percent increase of complaints received compared to 2019. All complaints related to PDC (32/32) have been settled this year. Overall, the number of complaints against PDCs increases every year.

**Figure 64**:
**Records of Complaints against PDC, 2017 to 2020**

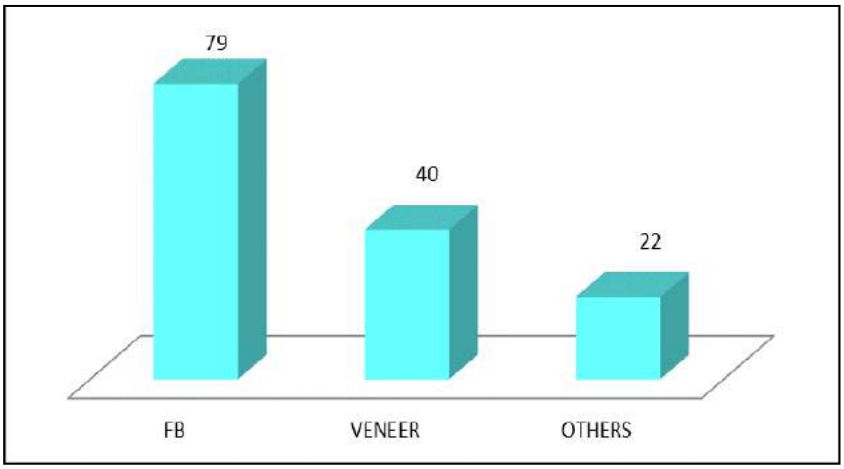



*Source: Oral Health Programme, MOH*

- **Complaints Regarding Illegal Dental Practices or Unregistered Dentists**

Complaints related to illegal dental practices or unregistered premises are categorized according to the services offered. In 2020 a total of 79 complaints (61.2 percent) received regarding fake braces (FB) services, 40 complaints (31 percent) related to veneer services and 22 complaints (7.8 percent) related to other services such as denture, whitening, extraction and others (**Figure 65**).

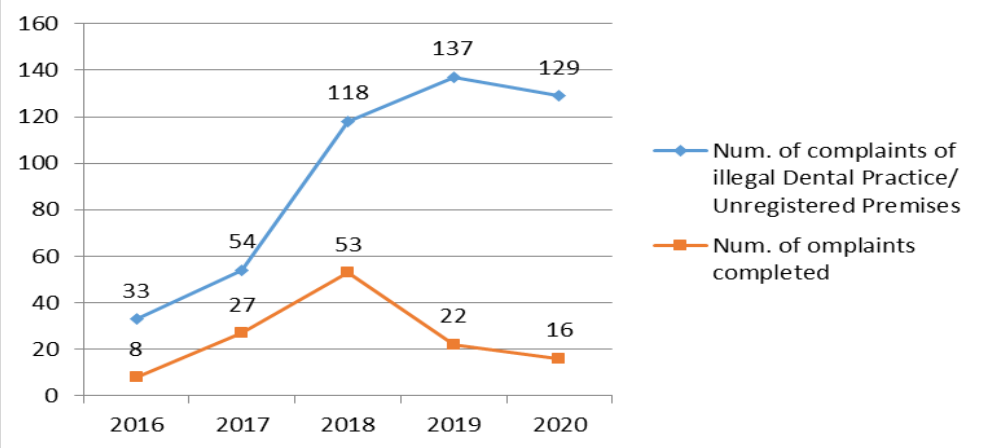
**Figure 65**:
**Illegal Dental Practices Complaints/ Unregistered Dentists Year 2020**




*Source: Oral Health Programme, MOH*

The trend of illegal dental practices complaints or unregistered dentists received for 2016 to 2020 is shown in **Figure 66.**

**Figure 66**:
**Receipt of Complaints of Illegal Dental Practice or Unregistered Premises, 2016 to 2020**




*Source: Oral Health Programme, MOH*

There were 129 complaints of illegal dental practices received in 2020; only 16 complaints (12.4 percent) have been resolved or action taken. Overall performance was slightly decreased due to the Movement Control Order during the COVID-19 pandemic.

## Prosecution and Compounding Activities

Prosecution and compounding activities are based on raiding activities carried out. Currently, all investigation papers will be submitted to the Private Medical Practice Control Division HQ for review and forwarded to the Legal Adviser Office, MOH for permission to prosecute.

- **Prosecution**

In 2020, no prosecution activity was carried out. Number of investigation papers which have not been granted permission to prosecute as shown in **Table 94**.

**Table 94**:
**Records of Investigation Papers Pending Due To Sanction from Deputy Public Prosecutor**

| TAHUN | BIL. KES | NEGERI | JUMLAH IP |
|---|---|---|---|
| 2018 | 9 | MELAKA | 1 |
| | | JOHOR | 1 |
| | | KELANTAN | 2 |
| | | N. SEMBILAN | 1 |
| | | SARAWAK | 1 |
| | | P.PINANG | 2 |
| | | PERLIS | 1 |
| | | **JUMLAH** | **9** |
| 2019 | 2 | PAHANG | 1 |
| | | N. SEMBILAN | 1 |
| | | **JUMLAH** | **3** |
| 2020 | 2 | KEDAH | 1 |
| | | N. SEMBILAN | 1 |
| | | **JUMLAH** | **2** |

*Source: Oral Health Programme, MOH*

**Table 95** shows a summary of prosecution cases for 2016 to 2020.

**Table 95:**
**Summary of Prosecution Cases with Sentences Imposed from 2016 to 2020**

| Year | Total case | States | Offences | Punishment |
|---|---|---|---|---|
| 2016 | 8 | Kedah | S 4(1) Act 586 | All prosecutions have been completed. Total fine of RM170,000 and imprisonment for 2 months |
| | | Perak | | |
| | | Perak | | |
| | | FT KL & Putrajaya | | |
| | | Melaka | | |
| | | Johor | | |
| | | Terengganu | | |
| | | Sarawak | | |
| 2017 | 14 | Pahang (4) | S 4(1) Act 586 | All prosecutions have been completed. Total fine RM300,200 2 case DNAA and 4 cases imprisonment |
| | | FT KL & Putrajaya (3) | | |
| | | Selangor (2) | | |
| | | Melaka | | |
| | | Terengganu | | |
| | | Perak | | |

| Year | Total case | States | Offences | Punishment |
|---|---|---|---|---|
| | | Kedah | | |
| | | Johor | | |
| 2018 | 16 | Melaka (3 – 2 compoundable offences) | S 4(1) Act 586 | 3 prosecution cases settled with a fine of RM100,000<br>3 compounding cases with a fine of RM72,000<br>10 cases have yet to be allowed to prosecute |
| | | Johor (2) | | |
| | | Terengganu | | |
| | | Selangor (1-compound) | | |
| | | FT KL & Putrajaya (2) | | |
| | | Kelantan (2) | | |
| | | Negeri Sembilan | | |
| | | Sarawak | | |
| | | Penang (2) | | |
| | | Perlis | | |
| 2019 | 3 | Pahang (2) | S 4(1) Act 586 | 1 case settled with a fine of RM50,000<br>2 cases have not been allowed to prosecute |
| | | Perak | | |
| 2020 | 2 | Kedah | Violation of Code of Professional Conduct | IP check at CKAPS HQ |
| | | Negeri Sembilan | S 4(1) Act 586 | |
| **Total** | **43** | | | |

*Source: Oral Health Programme, MOH*

- **Compoundable Offences**

Compounding offences under Act 586 has been enforced starting August 2017. Until 2020, there were four (4) compounding investigation papers shown in **Table 96**.

**Table 96**:
**Compounding Under Act 586 on PDC**

| Year | Total Cases | States | Offences | Punishment |
|---|---|---|---|---|
| 2018 | 3 | Melaka | 1. S 31(1)(c) Act 586<br>2. S 39(1) Act 586 | Total compound is RM130,000.<br>2 cases payment pending |
| | | FT Kuala Lumpur | | |
| 2019 | 1 | Selangor | S 39(1) Act 586 | Compound RM10,000 |
| 2020 | 0 | | | |
| **Total** | **4** | | | |

*Source: Oral Health Programme, MOH*

## Occupational Safety and Health

The Oral Health Programme, Ministry of Health Malaysia has published several guidelines in relation to occupational safety and health in dental facilities, namely:

- Guidelines on Infection Control in Dental Practice (February 2017)
- Guidelines on Maintaining Quality of the Dental Unit Water System (2010)
- Guidelines on Radiation Safety in Dentistry (2nd edition 2010)
- Guidelines for Occupational Safety and Health in the Dental Laboratory (1st edition 2002, 2nd edition 2011)
- Methods of Disposal of Hypodermic Needles (2013)
- Guidelines for Position Statement on The Use of Dental Amalgam (2nd edition 2013)

A checklist for Occupational Safety and Health Audits had been developed based on the relevant guidelines. The purpose is to ensure that the workplace environment is safe for both employees and public at all government dental facilities. The occupational safety and health audit checklist contains five (5) sections, namely:

- Safety and Health Management at Dental Facilities
- Cross Infection Control in Dental Facilities
- Use of Dental Amalgam in Dental Practices
- Dental Radiation Safety
- Safety and Health in the Dental Laboratories

- **Occupational Safety And Health (OSH) Audit**

The target of dental facilities audited for OSH has been increased from 33.3 percent in 2019 to 50 percent in 2020. However, the target of facilities audited to achieve a score of > 80 per cent was maintained at 95 percent. There are 13 types of facilities that have been identified for OSH audits:

- Dental clinic in health clinic
- Standalone dental clinic
- Dental clinic in the hospital
- Dental specialist clinic in the hospital
- Non hospital base dental specialist clinic in health clinic
- Dental clinic at urban transformation centre (UTC)
- Dental clinic at rural transformation centre (RTC)
- Dental clinics at institutions
- Dental clinic at at mother and child health clinic (KKIA)
- Mobile / Boat Dental Clinic
- Dental school clinic/ dental school centre
- Mobile dental team
- Mobile dental lab

In 2020, occupational safety and health audit activities were reduced compared to 2019 due to the COVID-19 pandemic. These audits involved dental facilities in health clinics, hospitals, maternal and child health clinics, mobile dental clinics and standalone dental clinics only. Audits for mobile dental teams, school dental institution and school dental clinics conducted before the COVID-19 pandemic were not affected.

## Facilities Audited for OSH

In 2020, a total of 1156 out of 2208 dental facilities have been targeted for OSH audits, which is about 50 percent of the total facilities throughout the state and the Federal Territory (**Table 97).** All states could not achieved the target due to the COVID-19 pandemic. However, all dental facilities in health clinics, maternal and child health clinics, mobile dental clinics, hospitals and standalone dental clinics have been audited.

**Table 97:**
**Distribution of OSH Audits by State 2020**

| No | States | No. of Facilities | | | |
|---|---|---|---|---|---|
| | | Total | No. of Audit Targeted | No. of Audit Conducted | % Audit |
| 1 | Johor | 231 | 114 | 114 | 100% |
| 2 | Kedah | 173 | 87 | 68 | 78.2% |
| 3 | Kelantan | 208 | 104 | 104 | 100% |
| 4 | Melaka | 86 | 43 | 23 | 53.5% |
| 5 | Negeri Sembilan | 119 | 60 | 59 | 98.3% |
| 6 | Pahang | 187 | 94 | 93 | 98.9% |
| 7 | Perak | 196 | 98 | 93 | 94.9% |
| 8 | Perlis | 51 | 26 | 8 | 30.8% |
| 9 | Pulau Pinang | 140 | 70 | 43 | 61.4% |
| 10 | Sabah | 204 | 105 | 102 | 97.1% |
| 11 | Sarawak | 284 | 145 | 48 | 33.0% |
| 12 | Selangor | 187 | 93 | 93 | 100% |
| 13 | Terengganu | 124 | 62 | 47 | 75.8% |
| 14 | FT Kuala Lumpur & Putrajaya | 98 | 49 | 39 | 79.6% |
| 15 | FT Labuan | 9 | 5 | 5 | 100% |
| | **Total** | **2208** | **1155** | **939** | **80.8%** |

*Source: Oral Health Programme, MOH*

- **OSH Audit Achievements**

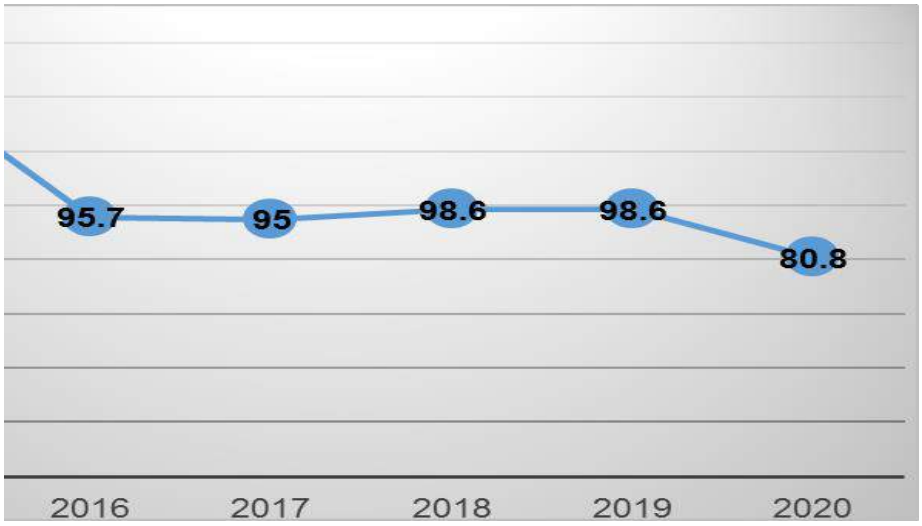
The target is that 95 percent of the audited facilities achieve a compliance score of $\geq$ 80 percent. Facility with an audit compliance score of below 80 percent will need to undergo a surveillance audit next year. From the audit, 99.5 percent (934/939) of the audited facilities were found to achieve a score of $\geq$ 80 percent (**Table 98)**.However, this is below the 2019 achievement. The trend of achievement from 2016 to 2020 is as shown in **Figure 67**.

**Table 98**:
**Audit Achievements for 2020**

| No. | States | No. of Facilities | | | |
|---|---|---|---|---|---|
| | | No. Audited | Audit Score <79% | Audit Score 80-89% | Audit Score ≥ 90% |
| 1 | Johor | 114 | 0 | 6 | 108 |
| 2 | Kedah | 68 | 0 | 5 | 63 |
| 3 | Kelantan | 104 | 0 | 10 | 94 |
| 4 | Melaka | 23 | 0 | 0 | 23 |
| 5 | Negeri Sembilan | 59 | 0 | 21 | 38 |
| 6 | Pahang | 93 | 0 | 9 | 84 |
| 7 | Perak | 93 | 0 | 0 | 93 |
| 8 | Perlis | 8 | 0 | 0 | 8 |
| 9 | Pulau Pinang | 43 | 0 | 2 | 41 |
| 10 | Sabah | 102 | 0 | 27 | 75 |
| 11 | Sarawak | 48 | 1 | 5 | 42 |
| 12 | Selangor | 93 | 4 | 15 | 74 |
| 13 | Terengganu | 47 | 0 | 5 | 42 |
| 14 | FT KL & Putrajaya | 39 | 0 | 4 | 35 |
| 15 | FT Labuan | 5 | 0 | 0 | 5 |
| | **Total** | **939** | **5** | **109** | **825** |

*Source: Oral Health Programme, MOH*

**Figure 67**:
**Audited Facilities Achieving ≥ 80 Percent Compliance with OSH Audits 2016 to 2020**

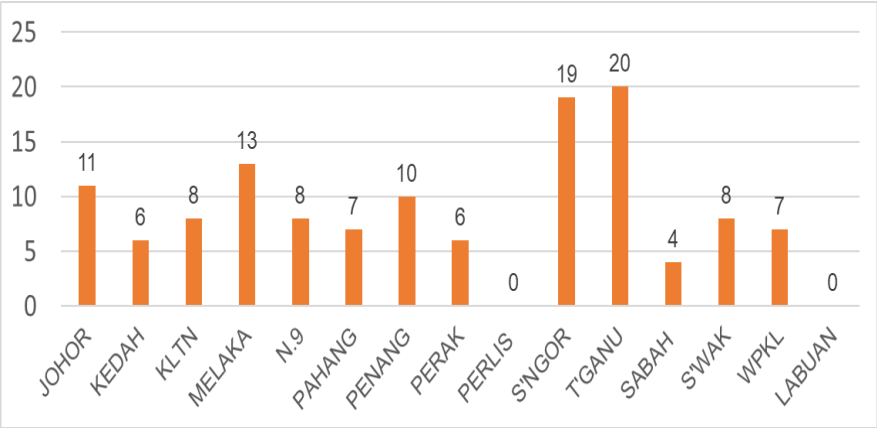



*Source: Oral Health Programme, MOH*

- **Incidence of Sharp Injuries**

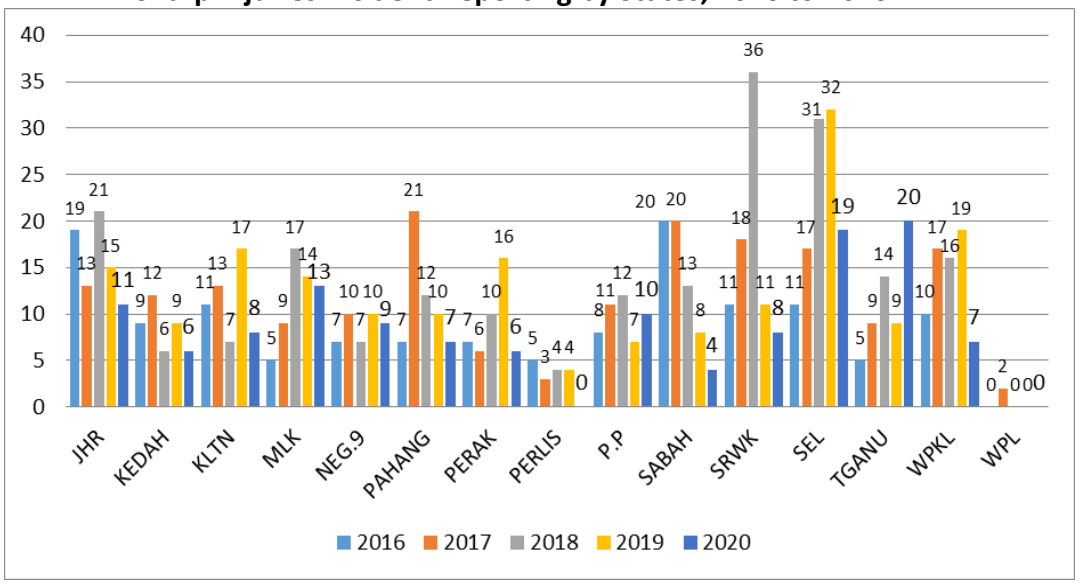
The incidence of injuries due to sharp equipment that occurred at government dental facilities in 2020 was lower than in 2019 (**Figure 68)**. Terengganu recorded the highest number of sharp injury incidents compared to the other states and the trend of these incidents since 2016 is as shown in **Figure 69.**

**Figure 68**:
**Sharp Injury Incidence, 2016 to 2020**




*Source: Oral Health Programme, MOH*

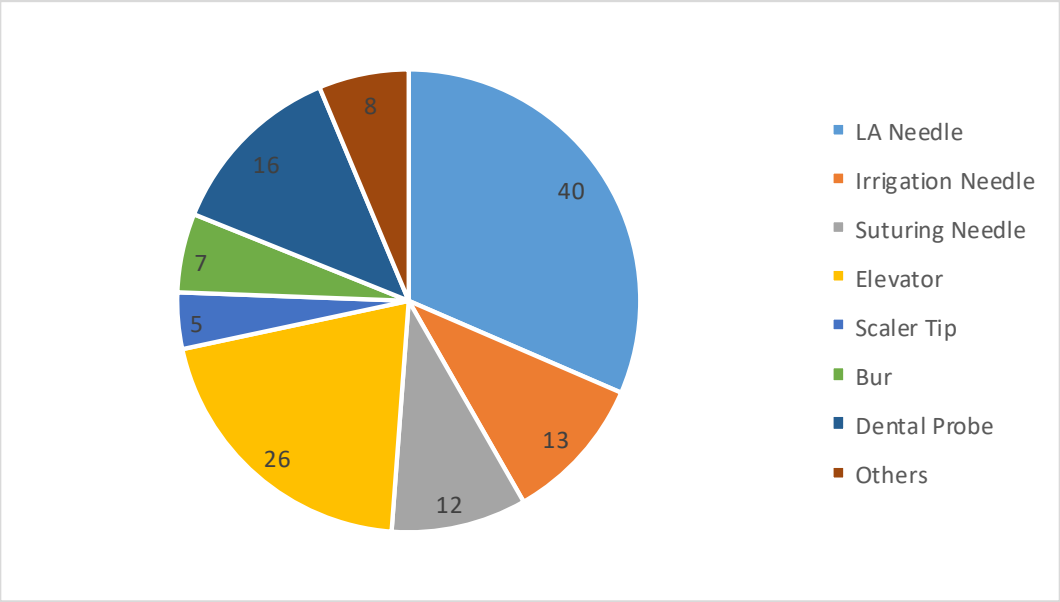
**Figure 69**:
**Sharp Injuries Incident Reporting by States, 2016 to 2020**




*Source: Oral Health Programme, MOH*

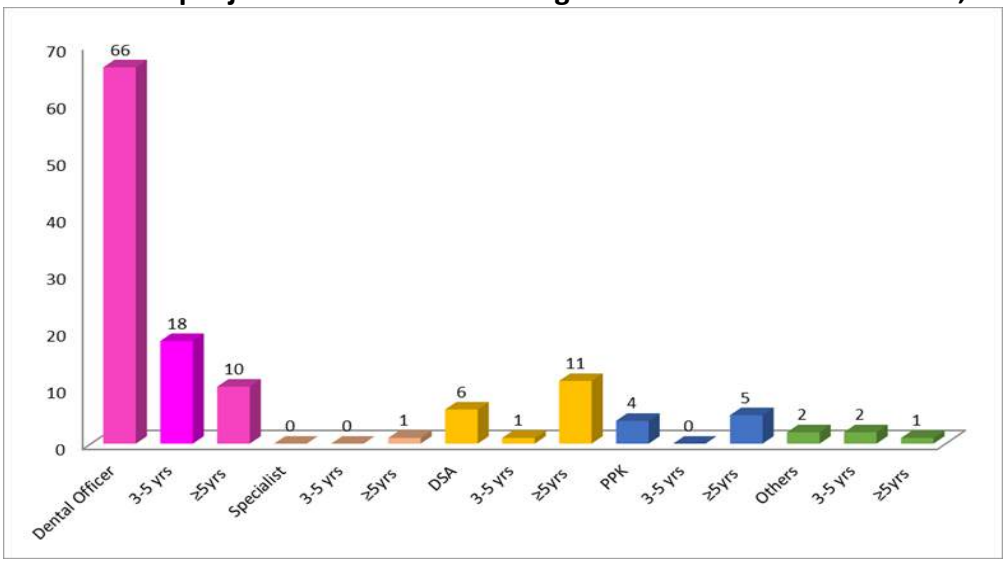
The types of sharp injuries are shown in **Figure 70**. The dental needle is still the largest contributor to sharp injuries incident which is 31.5 percent (40/127) of the cause. These sharp injuries incidents involved one (1) Dental Specialist, 94 Dental Officers, 18 Dental Surgical Assistants, nine (9) Health Care Assistants, one (1) Dental Technologist and four (4) trainees or daily part-time contract workers (**Figure 71)**. A total of 78 incidents involved new dental officers who have been in services for less than two (2) years.

**Figure 70:**
**Types of Sharp Injuries 2020**




*Source: Oral Health Programme, MOH*

**Figure 71**:
**Number of Sharp Injuries Incidents According to Post and Period of Service, 2020**




*Source: Oral Health Programme, MOH*

## Pre-Registration of Authorized Officers under Act 804

The appointment of Authorized Officers under Act 804 will be done in phases. A total of 52 dental officers will be appointed in the first phase consisting of Senior Director (Dental Health), Divisional Director, Deputy Director of Legal and Enforcement Branch, Deputy Director of State Health (Dental) and two (2) medical inspectors under Act 586 in CPP and each state/ Federal Territory. Pre-registration was carried out where the documents were completed and uploaded into the system.

- **Standard Operating Procedures**

In 2020 the Standard Operating Procedure for Complaint Management under the Dental Act 2018 was approved and currently on trial stage for a period of one year. Six (6) Standard Operating Procedures (SOP) of enforcement have been developed, approved and will be enforced once the Dental Act comes into force:

- SOP for Intelligence and Investigation;
- SOP for Raiding Activity;
- SOP for Seizure and Handling Digital Devices;
- SOP for Preparation of Investigation Papers;
- SOP for Prosecution; and
- SOP for Disposal of Goods Seized

Procedures related to authorize officers have been developed to facilitate the appointment of authorized officers under Act 804, as follows:

- Procedure for Appointment of Authorized Officers under the Dental Act 2018 [*Act 804*];
- Code of Ethics for Authorized Officers under the Dental Act 2018 [*Act 804*];
- Standard Operating Procedures for Management of Authorization Letters and Dental Authority Cards; and
- Procedure of Misconduct of Authorized Officers Under Act 804

- **Promotion Activities**

Preventive initiatives were carried out to raise public awareness on the issue of illegal dental practices which include radio talk, television interview, discussions panel, open forum and organize exhibitions as well as the preparation of pamphlets and banner related to illegal dental practices. Terengganu recorded the highest number of promotional activities carried out **(Table 99)**. Radio/ TV talk activities also increased in 2020 compared to 2019.

**Table 99**:
**Promotion Activities, 2020**

| Bil | Negeri | Bual Bicara Radio/ TV | Bual bicara *live audience* | Ceramah | Pameran |
|---|---|---|---|---|---|
| 1. | Johor | 0 | 0 | 1 | 0 |
| 2. | Kedah | 0 | 0 | 2 | 0 |
| 3. | Kelantan | 3 | 0 | 0 | 0 |
| 4. | Melaka | 1 | 0 | 0 | 0 |
| 5. | Negeri Sembilan | 0 | 0 | 0 | 0 |
| 6. | Pahang | 0 | 0 | 7 | 0 |
| 7. | Perak | 0 | 0 | 1 | 0 |
| 8. | Perlis | 0 | 0 | 10 | 1 |
| 9. | Pulau Pinang | 0 | 0 | 2 | 0 |
| 10. | Sabah | 0 | 0 | 0 | 0 |
| 12. | Sarawak | 5 | 0 | 0 | 0 |
| 11. | Selangor | 0 | 0 | 0 | 0 |
| 13. | Terengganu | 1 | 0 | 109 | 0 |
| 14. | Wilayah Persekutuan Kuala Lumpur & Putrajaya | 0 | 0 | 1 | 0 |
| 15. | Wilayah Persekutuan Labuan | 0 | 0 | 0 | 0 |
| | **Jumlah** | **10** | **0** | **133** | **1** |

*Source: Oral Health Programme, MOH*

- **Competence Enhancement Activities of Dental Enforcement Officers**

Legal and Enforcement Department also organized activities to enhanced competencies among dental enforcement officers. In 2020, RM30,000.00 were received for this purpose which is less than the allocation received in 2019. Enforcement dental officers also have a chance to participate in training/ courses organized by the Private Medical Practice Control Division headquarters and JKN/ JKWP and others agencies (**Table 100**). The target is set for all enforcement dental officers to attend training/ courses related to law or enforcement at least two (2) throughout the year. Even though Malaysia was facing COVID-19 pandemic, this division able to organized two (courses/training for enforcement dental officers, as shown in **Table 101**.

**Table 100**:
**Courses/ training organized other than by CPP for Enforcement Dental Officers, 2020**

| DATE | TITLE OF COURSES/ TRAINING | NO. OF OFFICER | ORGANIZER |
|---|---|---|---|
| 24 Aug 2020 | *Perbincangan MedPCs Antara Pengarah Amalan Perubatan dengan CKAPS JKN/WP dan PKP* | 2 | *CKAPS HQ* |
| 13 Feb 2020 | *Perbincangan Pegawai Proses pendaftaran KPJKS 2020* | 20 | *PKP KKM* |
| 14-15 Sept 2020 | *Bengkel Penyediaan Kertas Siasatan Untuk Pendakwaan Yang Berkesan* | 1 | *Pejabat PUU, Pulau Pinang* |
| 25-26 Nov 2020 | *Kursus Pegawai Penguatkuasaan Pergigian Negeri Selangor* | 18 | *BKP Selangor* |
| 14 Dec 2020 | *CPD Siri 11/2020 Pembacaan Akta 586 Bahagian 4 (Siri Webinar CKAPS 2020)* | 3 | *CKAPS HQ* |
| 2-4 April 2019 | *Kursus Pemantapan Penyediaan Kertas Siasatan & Pendakwaan* | 2 | *CKAPS LABUAN* |
| 7-9 Oct 2020 | *Bengkel Perbincangan isu-isu Pendaftaran dan Perlesenan KPJKS untuk Anggota CKAPS negeri dan HQ* | 14 | *CKAPS HQ* |
| 16 Jan 2020 | *Taklimat Pemantapan Pegawai Penguatkuasa Pemantau* | 11 | *BKP, JKN WPKL & P* |
| 14 Feb 2020 & 13 March 2020 | *Sesi Pembudayaan Ilmu CKAPS melalui Sidang Video Bersama CKAPS HQ Bil. 1/2020 & 2/2020* | 2 | *Bahagian Amalan Perubatan & CKAPS Negeri Sembilan* |
| 2-3 Sept 2020 | *Kursus Pemprofilan dan Operasi Siber 2020* | 1 | *Farmasi JKN Melaka* |
| 15 Sept 2020 | Seminar Medicolegal Perspectives in Dentistry | 4 | *BKP Johor* |

| | | | |
|---|---|---|---|
| 7 Sept 2020 | *Latihan e-Kehakiman* | 2 | *Mahkamah* |
| 22-23 Dec 2020 | Intelligence Gathering *Penguatkuasa Sarawak* | 8 | *CKAPS JKNS* |
| **DATE** | **TITLE OF COURSES/ TRAINING** | **NO. OF OFFICER** | **ORGANIZER** |
| 20 Jan 2020 | *Latihan Tertutup MOH*: Social Media Training Session with Facebook | 2 | *Farmasi KKM* |
| 26 May 2020 | COVID-19 Current Situation & Impact on Law Enforcement | 1 | *Interpol Malaysia* |
| 28 May 2020 | Law Enforcement Response to COVID-19: Challenges and The Best Practices Interpol | 1 | *Interpol Malaysia* |

*Source: Oral Health Programme, MOH*

**Table 101:**
**Training Organized by CPP for the Year 2020**

| DATE | TITLE OF COURSES/ TRAINING | NO. OF OFFICER |
|---|---|---|
| 12-13 Oct 2020 | *Kursus Pengenalan Asas Fotografi Forensik 2020* | 32 |
| 18-20 Nov 2020 | *Kursus Asas Risikan dan Intipan 2020 (Peruntukan diserahkan kepada BKP Pahang)* | 17 |

*Source: Oral Health Programme, MOH*

## ORAL HEALTH QUALITY

### Quality Assurance Programme (QAP)

With the advent of the Quality Assurance Programme (QAP) in 1985; aimed to improve quality, efficiency and effectiveness of health services delivered by the Ministry of Health (MOH), the Oral Health Programme (OHP) began to embark on quality improvement initiatives and coordinated activities related to these initiatives.
The QAP also facilitates a planned and systematic evaluation of the quality of services delivered. The goal of the QAP is to ensure that 'optimum achievable benefit' is delivered and the clients'/patients' best outcomes are attained within the constraints of resources.

Among the indicators monitored under QAP are the National Indicator Approach (NIA) and the District/Hospital Specific Approach (DSA/HSA). The achievements of these indicators are monitored twice a year at national level. Indicators will be reviewed periodically to ensure that they are always relevant and in line with current conditions or norms.

- **National Indicator Approach (NIA)**

In 2020, four (4) indicators under NIA were monitored to measure the performance of primary and community oral healthcare services **(Table 102)**.

**Table 102:**
**Oral Health Indicators under NIA, 2019 and 2020**

| No. | Indicator | Standard (percentage) | Achievement (percentage) | | SIQ Yes/No |
|---|---|---|---|---|---|
| | | | 2019 | 2020 | |
| 1 | Percentage of primary schoolchildren maintaining orally-fit status | ≥ 65 | 62.5 | 60.1 | Yes |
| 2 | Percentage of secondary schoolchildren maintaining orally-fit status | ≥ 70 | 68.4 | 67.6 | Yes |
| 3 | Percentage of non-conformance of fluoride level at reticulation points (Level < 0.4ppm) | ≤ 25 | 14.9 | 14.2 | No |
| 4 | Percentage of non-conformance of fluoride level at reticulation points (Level > 0.6ppm) | ≤ 7 | 0.9 | 0.4 | No |

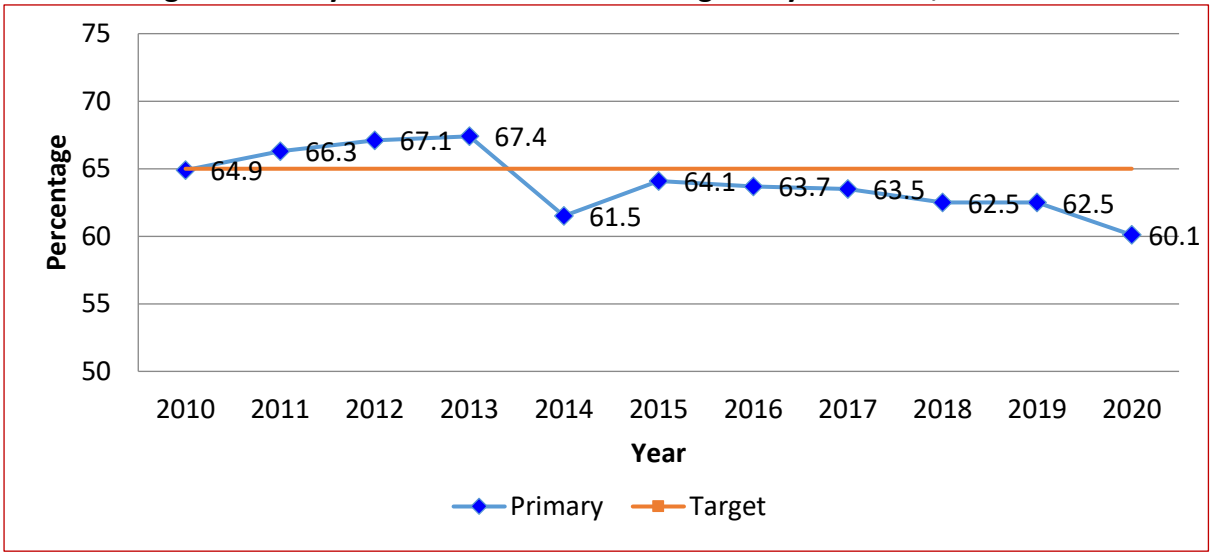
*Source: Oral Health Programme, MOH*

In 2020, two (2) out of four (4) indicators achieved their targets. 'Percentage of non-conformance of fluoride levels at reticulation points (Level < 0.4 ppm) and 'Percentage of non-conformance of fluoride levels at reticulation points (Level > 0.6ppm) showed improvement compared with achievements in 2019.

Over the years, the performance at state and national levels for 'Percentage of primary schoolchildren maintaining orally-fit status' and 'Percentage of secondary schoolchildren

maintaining orally-fit status' showed a decreasing trend and were below targets following the introduction of the new Gingival Index for Schoolchildren (GIS) in 2014 **(Figure 72 and 73).**

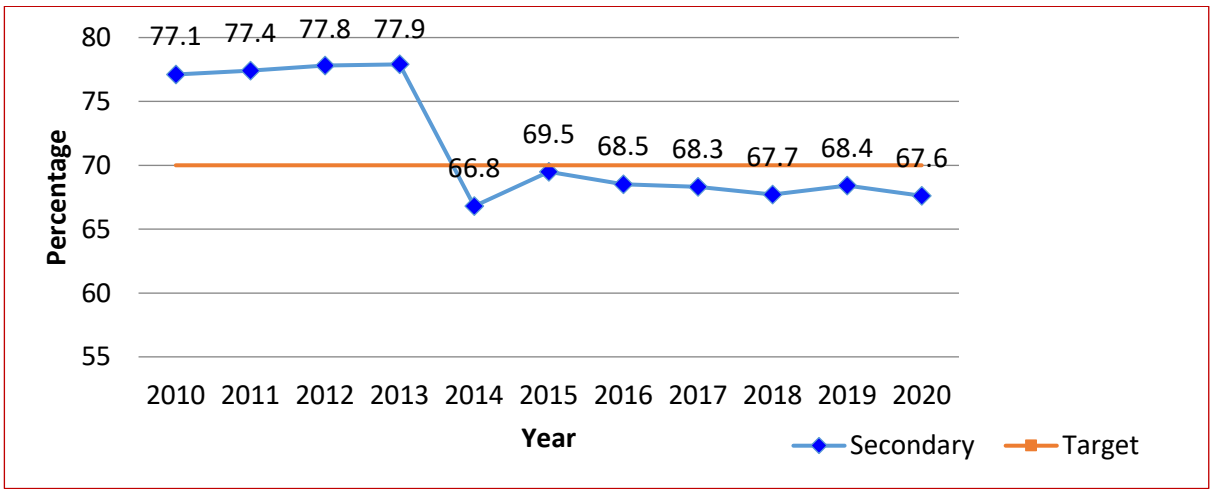
**Figure 72:**
**Percentage of Primary Schoolchildren Maintaining Orally Fit Status, 2010 until 2020**




*Source: Annual Report HIMS (Oral Health Sub-Programme); State Service Data*

There is gradual decline in proportion of primary schoolchildren maintaining orally-fit status from 2015 (64.1 percent) to 2020 (60.1 percent). The proportion of secondary schoolchildren maintaining orally-fit status also showed a decreasing trend from 2015 (69.5 percent) to 2020 (67.6 percent). All in all, the performance for both indicators declined compared to 2019, mainly attributed to a general lack of awareness on the importance of oral health among schoolchildren, school authorities as well as their parents or guardians. The achievements of these indicators for the coming year are estimated to drop even further because the mobile dental teams are not able to provide comprehensive school dental service due to the Movement Control Order (MCO) since March 2020.

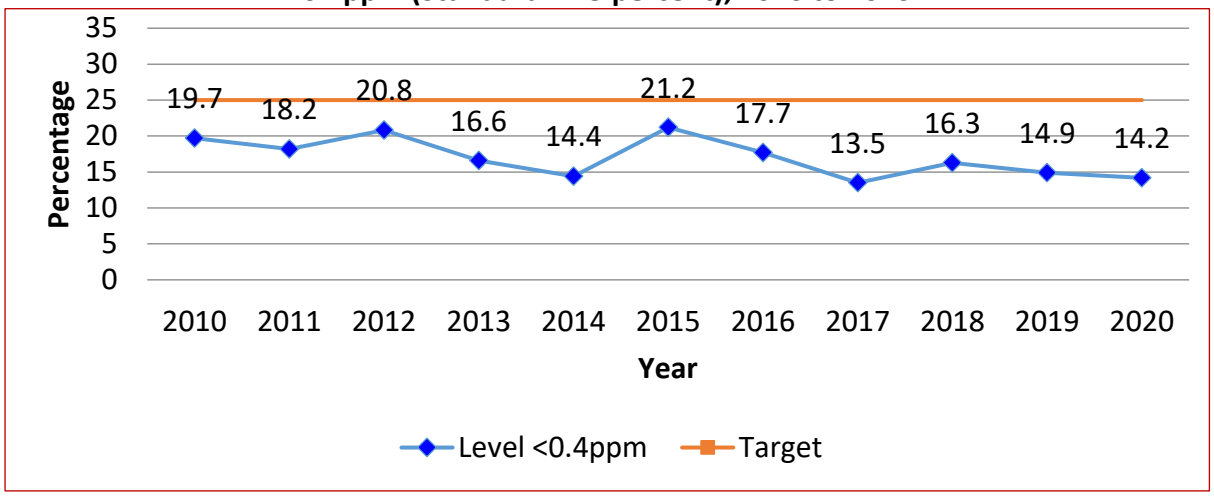
**Figure 73:**
**Percentage of Secondary Schoolchildren Maintaining Orally-fit Status, 2010 until 2020**




Source: Annual Report HIMS (Oral Health Sub-Programme); State Service Data

From 2010, the percentage of non-conformance of optimal fluoride for levels < 0.4 ppm has achieved the set standard. However, the achievement fluctuates between 21.2 percent (2015) to 14.2 percent (2020), the best being 14.2 percent in 2020 (**Figure 74**).

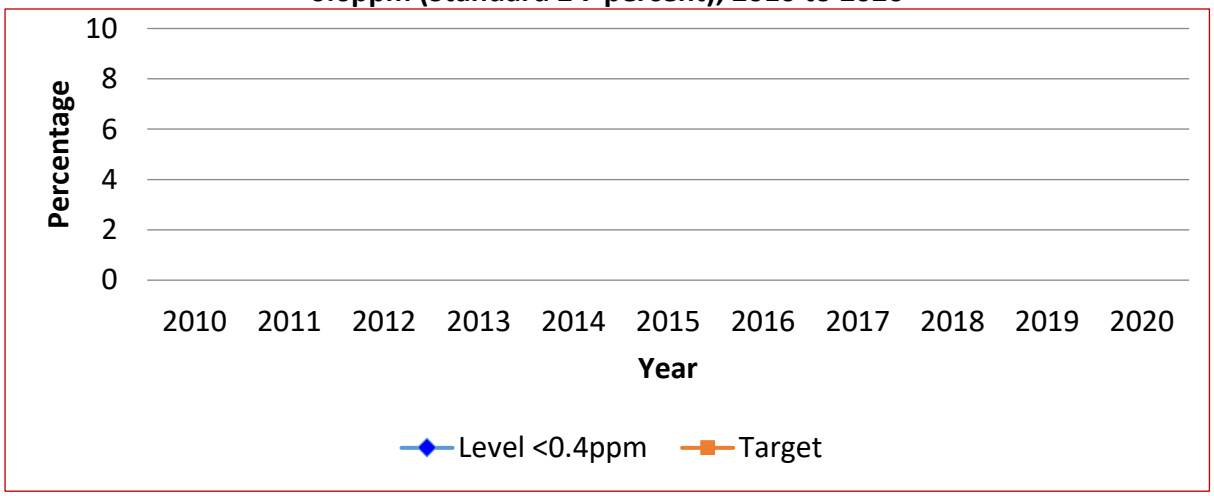
**Figure 74:**
**Percentage of Non-conformance of Optimal Fluoride Level at Reticulation Points, Level < 0.4ppm (Standard ≤ 25 percent), 2010 to 2020**




Source: State NIA Report

From 2010 to 2020, the percentage of non-conformance of optimal fluoride for levels > 0.6 ppm has consistently achieved the set standard **(Figure 75)**.

**Figure 75:**
**Percentage of Non-conformance of Optimal Fluoride Level at Reticulation Points, Level > 0.6ppm (Standard ≤ 7 percent), 2010 to 2020**




Source: State NIA Report

The percentage of non-conformance of optimal fluoride level at reticulation points, level < 0.4 ppm and level > 6 ppm, have achieved the set standard even though the achievement fluctuates. Thus, fluoride levels still need vigilant monitoring to ensure maintenance of optimal fluoride concentration for maximum effectiveness.

- **District Specific Approach (DSA)**

DSA indicators are developed by states and districts relating to their specific issues. As in previous years, DSA indicators pertaining to monitoring and measuring performance of the ante-natal services are most commonly adopted by all states. These indicators include rates of new attendance, treatment and oral health education given to ante-natal mothers. Other common DSA indicators are related to oral health services for toddler, pre-school, primary and secondary schoolchildren.

A few states have indicators that are not typically taken up in the other states. Among the unique indicators are as below:

- Incidence of sharp or needle-stick injuries among healthcare workers
- Percentage of reject-retake radiographs (images)
- Percentage of toddlers given fluoride varnish
- Percentage of redo fillings on permanent dentition
- Percentage of failed fissure sealants
- Percentage of full dentures issued within two months
- Percentage of redo dentures in dental health clinics

Johor, Perak and Kedah impose specific DSA indicators for different districts accordingly; whereas other states adopt the same DSA indicators for all their districts.

- **Key Performance Indicators (KPI) 2020**

In 2020, 25 indicators were monitored as Key Performance Indicators (KPI) by OHP **(Table 103)**. Eleven (11) indicators were monitored three (3) monthly, another 11 were monitored six (6) monthly and three (3) indicators were monitored on a yearly basis. Overall, 11 indicators achieved targets, while 14 indicators fell short, being deemed as shortfalls in quality (SIQ) in OHP services. The root causes of these SIQ were identified by conducting root cause analysis (RCA). By identifying the root cause of each and every SIQ, OHP can then plan and execute good remedial and improvement strategies to eliminate them. Preventive and corrective actions shall be taken to ensure non-recurrence of the causative factors.

In 2020, 'Percentage of dental clinics providing daily outpatient services' contributed as Ministerial Performance Indicator (MPI) for the Health Minister (KPI 1, Table 77) and was monitored by the Management Service Division, MOH. Two (2) indicators namely; 'Percentage of dental clinics providing daily outpatient services' and 'Percentage of secondary school children maintaining orally-fit status' (KPI 1 and KPI 7, Table 77) were chosen as indicators for the Director-General of Health and monitored by the Public Services Department, MOH.

**Table 103:**
**Key Performance Indicators, Oral Health Programme, MOH 2020**

| KPI DOMAIN | KPI NUMBER | MONITOR INDICATOR | TARGET (PERCENTAGE) | ACHIEVEMENT (PERCENTAGE) |
|---|---|---|---|---|
| Accessibility to MOH oral healthcare services | 1 | Percentage of dental clinics providing daily outpatient services | ≥84 | 86.0 |
| | 2 | Percentage of health clinics with dental facility components | ≥75 | 66.9 |
| | 3 | Percentage of antenatal patient coverage | ≥60 | 44.0 |
| Oral health status of school children | 4 | Percentage of primary school children rendered orally-fit (over new attendances) | ≥96.5 | **36.2** |
| | 5 | Percentage of secondary school children rendered orally-fit (over new attendances) | ≥85 | **39.0** |
| | 6 | Percentage of primary school children maintaining the orally-fit status | ≥65 | 60.1 |
| | 7 | Percentage of secondary school children maintaining the orally-fit status | ≥70 | 67.6 |
| | 8 | Percentage of 6 year-old school children free of dental caries | ≥50 | 35.1 |
| | 9 | Percentage of 12 year-old of school children free of dental caries | ≥70.5 | 69.7 |
| | 10 | Percentage of 16 year-old school children free of dental caries | ≥50 | 55.4 |
| | 11 | Percentage of primary school children who required fissure sealant received fissure sealant treatment | ≥96 | **76.0** |
| | 12 | Percentage of school children identified smoking (through *KOTAK* programme) who has undergone at least 3 interventions | ≥58 | **39.1** |
| Oral health status of antenatal mother | 13 | Percentage of antenatal mothers with orally fit status | ≥45 | 31.3 |

| | | | | |
|---|---|---|---|---|
| Oral health status of elderly | 14 | Percentage of 60 year-olds with 20 or more functional teeth | ≥60 | 41.6 |
| Delivery of denture services | 15 | Percentage of patients who received their dentures within 3 months | ≥64 | 70.1 |
| | 16 | Percentage of patients aged 60 years and above who received their dentures within 8 weeks | ≥50 | 56.2 |
| Efficiency and effectiveness of services delivery | 17 | Percentage of *ikon Gigi* (iGG) who conducts oral health promotion activities at least once each month | ≥40 | 45.2 |
| | 18 | Percentage of budget for the National In-Service Training programmes as organized by OHP is fully expended by the first week of December in the current year | 100 | 100 |
| Quality dental service and MS ISO certification | 19 | Percentage of dental clinics with MS ISO certification | ≥85 | 88.2 |
| | 20 | Percentage of MoH dental facilities which achieved at least 80 percent compliance during Safety and Health audits | ≥95 | **84.5** |
| Monitoring of private dental clinics | 21 | Percentage of monitoring inspection conducted on identified private dental clinics | 100 | **89.5** |
| Clients charter index | 22 | Percentage of outpatients who received treatment within 60 minutes | ≥86 | **93.9** |
| Index of clients satisfaction | 23 | Percentage of clients satisfied with dental services / treatment | ≥95 | **98.0** |
| Index of innovation culture | 24 | Innovation Culture Replication – all Dental Clinics replicating / practicing innovation (innovation refers to the replication and innovation developed within 2 (two) years) | ≥80 | 95.7 |
| Complaints Resolution Index | 25 | Percentage of complaints resolved completely | ≥85 | 98.6 |

*Source: Oral Health Programme, MOH*

- **Client Satisfaction Survey (CSS)**

A self-administered questionnaire from OHP, MOH that measures patients' satisfaction is used in Client Satisfaction Survey carried out by dental clinics. Five (5) dental clinics from each state were chosen to conduct the survey and generate a Client Satisfaction Survey Report.

In 2020, at least 90 percent of clients, involved in this survey from all states, Federal Territories (FT) and the Children Dental Centre/Ministry of Health Training Institute were satisfied with the dental services provided to them except Terengganu (84.9 percent). The highest achievers were Perlis and FT Labuan (100 percent). The national achievement was at 97.3 percent.

- **Clients' Charter**

There are two (2) main areas for the OHP Clients' Charter:

1. Core Clients' Charter of the MOH, is monitored by Pharmaceutical Services Programme who plays a role as Secretariat for Core Clients' Charter (**Table 104**). The Core Clients' Charter report is submitted to the secretariat based on the frequency of reporting the indicators.
2. In 2020, Clients' Charter for OHP, MOH has achieved all targets as shown in **Table 105.**

**Table 104:**
**Core Clients' Charter of the Ministry of Health**

| Core Clients' Charter | Indicator | Target | Achievement |
|---|---|---|---|
| *Memastikan setiap pelanggan berpuas hati dengan perkhidmatan diberikan dengan memantau:* | *70 peratus pesakit luar dipanggil untuk rawatan oleh pegawai pergigian dalam tempoh 30 minit. (Pengukuran 2 kali setahun)* | 70 percent | 83.1 percent |
| | *90% pesakit berpuas hati dengan perkhidmatan pergigian yang diberikan. (Pengukuran sekali setahun)* | 90 percent | 98.3 percent |
| *Memastikan permohonan dan kelulusan perkhidmatan diproses dan diselesaikan dalam tempoh berikut dari tarikh borang permohonan lengkap diterima serta memenuhi syarat-syarat permohonan dan perundangan yang ditetapkan* | *Pendaftaran Klinik Pergigian Swasta: 95 peratus ditentusahkan dalam tempoh 5 hari (dari tarikh fail permohonan diterima oleh Unit Kawalan Amalan Perubatan Swasta (UKAPS)) (Pengumpulan data setiap 6 bulan)* | 95 percent | 100 percent |

*Source: Oral Health Programme, MOH 2020*

**Table 105:**

**Clients' Charter, OHP, MOH Achievement 2020**

| No. | Client's Charter Indicator | Target (percentage) | Achievement (percentage) |
|---|---|---|---|
| 1 | Clients are served efficiently and in a friendly manner | 100 | 100 |
| 2 | Clients are given relevant information on services provided | 100 | 100 |
| 3 | Clients with appointment are seen within 15 minutes of their appointment time | 100 | 100 |

Source: Oral Health Programme, MOH 2020

- **MS ISO 9001:2015**

Nationwide, out of 676 dental clinics providing primary dental services, 596 dental clinics (88.2 per cent) have obtained certification. The only state which has not been certified with MS ISO 9001: 2015 is Sarawak **(Table 106).**

**Table 106:**

**MS ISO 9001: 2015 Certification Status by State, District and Facility, 2020**

| State | No of districts with certification | No of districts | Percentage of districts with certification (%) | No of dental clinics with certification (%) | No of dental clinics | Percentage of dental clinics with certification (%) |
|---|---|---|---|---|---|---|
| Perlis | 2 | 2 | 100 | 9 | 10 | 90 |
| Kedah | 11 | 11 | 100 | 59 | 59 | 100 |
| Pulau Pinang | 5 | 5 | 100 | 28 | 28 | 100 |
| Perak | 10 | 10 | 100 | 58 | 72 | 80.6 |
| Selangor | 9 | 9 | 100 | 65 | 65 | 100 |
| FT KL & Putrajaya | 5 | 5 | 100 | 20 | 20 | 100 |
| Negeri Sembilan | 7 | 7 | 100 | 41 | 41 | 100 |
| Melaka | 3 | 3 | 100 | 27 | 30 | 90 |
| Johor | 10 | 10 | 100 | 89 | 91 | 97.8 |
| Pahang | 11 | 11 | 100 | 53 | 73 | 72.6 |
| Kelantan | 10 | 10 | 100 | 63 | 65 | 96.9 |
| Terengganu | 8 | 8 | 100 | 44 | 46 | 95.7 |
| Sabah | 9 | 9 | 100 | 37 | 37 | 100 |
| FT Labuan | 1 | 1 | 100 | 2 | 2 | 100 |
| PPKK & ILKKM | 1 | 1 | 100 | 1 | 1 | 100 |
| **No of Multisite Cerfitication** | **102** | **102** | **100** | **596** | **640** | **93.1** |
| **Sarawak** | 0 | 11 | 0 | 0 | 36 | 0 |
| **Malaysia** | **102** | **113** | **90.3** | **596** | **676** | **88.2** |

Source: Oral Health Programme, MOH 2020

## Quality Improvement Initiatives (QII)

The Quality Improvement Initiative (QII) activities are a systematic and continuous approach to improve the quality of services provided. QII aims to achieve the highest standards and is not just limited to pre-set standards. Processes, rather than people are at the center of QII, so the activities are intrinsically focused on preventing mistakes rather than playing the blame game and pointing fingers at individuals. In the event of an error being committed, remedial actions should follow after performing root cause analysis (RCA).

- **Feedback Management (Complaint And Non-Complaint)**

The Oral Health Quality Section (OHQS) is responsible and functions as feedback coordinator and complaints bureau in OHP. At national level, OHQS also monitors feedback received by states on a monthly basis.

In 2020, OHP received a total of 565 responses, comprising 268 complaints and 297 non - complaints. Throughout 2020, 100 percent of enquiries/complaints were answered and resolved within the stipulated period.

- **Patient Safety And Incident Reporting**

Each dental facility is required to submit data both online, via a website developed by the Patient Safety Unit, Medical Development Division and also manually to OHQS, at the end of each year. There are four (4) Malaysian Patient Safety Goals (MPSG) adopted by dental clinics **(Table 107)**, namely:

- To implement clinical governance
- To improve medication safety
- To reduce patient fall
- To implement Patient Safety Incident Reporting (IR) and Learning System

**Table 107:**
**Malaysian Patient Safety Goals Achievement, 2020**

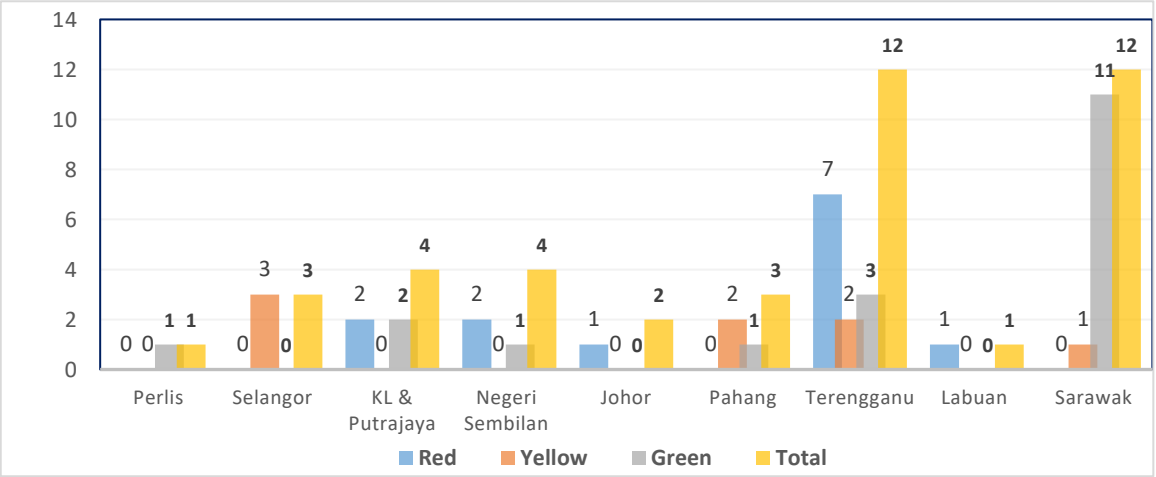
| NO | MPSG | TARGET | ACHIEVEMENT |
|---|---|---|---|
| 1 | To implement Clinical Governance (CG)<br><br>$\frac{\text{Number of facilities implemented CG}}{\text{Total number of facilities}}$ X 100 | 100 percent | 100 percent |
| 7 | To Improve Medication Safety<br>• Number of medication errors (“Actual”)<br>• Number of medication errors (“Near Misses”) | 0 | 0 |
| 9 | To Reduce Patient Fall<br>• Percentage reduction in number of falls (Adults)<br>• Percentage reduction in number of falls (Paeds) | More or equal to 10 percent reduction | 100 percent increment |

| | | | |
|---|---|---|---|
| | $\frac{\text{Number of falls this year – Number of falls last year}}{\text{Number of fall last year}}$ X 100 | | *2019 – five (5) cases<br>*2020 – 10 cases |
| 13 | To implement Patient Safety Incident Reporting (IR) and Learning System<br><br>$\frac{\text{Number of facilities which implement IR \& learning system}}{\text{Total number of facilities}}$ X 100 | 100 percent | 100 percent |

*Source: Oral Health Programme, MOH 2020*

Under IR, there are 10 codes relating to dental clinics. Each code is further divided into red, yellow and green categories. Each State Oral Health Division is required to send their incident reports to OHQS every three (3) months. It would be pertinent to note that only red category incidents attached with full RCA reports need to be submitted to OHQS. Incident reporting (IR) data for 2020 by states are shown as in **Figure 76.**

**Figure 76:**
**Incident Reporting, 2020**




*Source: Oral Health Programme, MOH 2020*

In 2020, a total of 40 incidents were reported and the number of incidents categorised under green, yellow and red was 19, 8 and 13 respectively. On a positive note, there were no incidents reported in Kedah, Penang, Perak, Melaka, Kelantan, Sabah and PPKK & ILKKM.

- **Clinical Monitoring**

The draft of the clinical monitoring guidelines is still under the purview of OHQS and has been discussed at several meetings at OHP. The trial sessions for implementation of this guideline , planned at a few sampled clinics were postponed, because of MCO, following the COVID-19 pandemic that began to hit the country as early as in March 2020.

- **Pain As Fifth Vital Sign (P5VS)**

*Garispanduan Tahap Kesakitan Sebagai Tanda Vital Kelima dan Pengurusan Kesakitan di Klinik Pergigian* was approved and published on June 2020 after piloting its implementation at every state and pre-tested at one (1) dental clinic per district in 2019. In 2020, the P5VS programme entered its second phase of implementation at three (3) dental clinics in each district per state. It only involved dental clinics which are located together with the health clinics. P5VS programme should be monitored by the respective State Oral Health Division.

All dental personnel involved in treating patients at the dental clinics need to be trained through training of trainers (ToT) or continuous dental education (CDE) sessions. For awareness activities, it will involve all members of various positions who are directly or indirectly involved with the treatment of dental patients.

## Other Quality Activities

- **Ministry of Health Innovation Award (AIKKM)**

AIKKM 2020 was held entirely online due to the current restrictions imposed under the movement control order amidst the COVID-19 pandemic. There are four (4) categories of innovation competing in this event, namely; product, service, process and technology categories. The names of the winners and their winning projects at AIKKM 2020 are as shown in **Table 108**.

In 2020, the organising committee comprised of OHP as main secretariat in collaboration with the Management Services Division, Family Health Development Division, Policy & International Relations Division and Information Management Division.

The objectives of organising this annual program/competition are to:

a. Give recognition to the innovations produced by MOH staff
b. Foster a culture of creativity and innovation in service delivery
c. Introduce and disseminate exemplary innovation results for mutual benefits
d. Contribute to improving the quality of customer service delivery

**Table 108 :**
**Winners of AIKKM 2020**

| Category | Winners Position | Project | Department | State |
|---|---|---|---|---|
| **Product** | **First** | **Easy Clean** | ***Klinik Pergigian Alor Setar, Pejabat Kesihatan Pergigian Daerah Kota Setar / Pendang*** | **Kedah** |
| | Second | Improvised Replacement Oxygenator With Quick-Clip Connector Circuit To Reinstate Bypass Surgery | *Unit Kardiotorasik Anestesiologi dan Perfusi, Hospital Sultanah Aminah, Johor Bahru* | Johor |
| | Third | Radiolucent Hip Spica Frame (RADIO-F) | *Jabatan Ortopedik, Hospital Sultanah Nur Zahirah, Kuala Terengganu* | Terengganu |
| | Special Jury Award | i-Respro Powered Air Purifying Respirator (PAPR) | *Jabatan Bedah Mulut & Maksilofasial, Hospital Sultan Haji Ahmad Shah* | Pahang |
| **Service** | First | Kit4me | *Bahagian Keselamatan Dan Kualiti Makanan, Jabatan Kesihatan Negeri Sembilan* | Negeri Sembilan |
| | Second | Smart Purple Zone | *Jabatan Kecemasan Dan Trauma, Hospital Tuanku Jaafar Seremban* | Negeri Sembilan |
| | Third | Clinic Ride | *Pejabat Kesihatan Daerah Kota Tinggi* | Johor |
| | Special Jury Award | Damage Control Resuscitation Suite (DCR Suite) | *Jabatan Kecemasan dan Trauma, Hospital Sungai Buloh* | Selangor |
| **Process** | First | Fogging Alert System | *Pejabat Kesihatan Daerah Kemaman* | Terengganu |
| | Second | FoodEX Tracker | *Unit Dietetik, Hospital Alor Gajah* | Melaka |
| | Third | Pharmdex | *Jabatan Farmasi, Hospital Melaka* | Melaka |
| | Special Jury Award | *Sistem Pengurusan Data Bersepadu Makmal COVID-19* | *Makmal Kesihatan Awam Kebangsaan* | IPKKM |
| **Technology** | First | MySejahtera | *Bahagian Kawalan Penyakit* | IPKKM |
| | Second | Asset & Services Information System (ASIS) | *Bahagian Perkhidmatan Kejuruteraan* | IPKKM |
| | Third | Malaysian Food Composition Database (MyFCD) | *Bahagian Pemakanan* | IPKKM |
| | Special Jury Award | *Sistem Bantuan Pengurusan Pesakit* | *Unit Kerja Sosial Perubatan & Unit Teknologi Maklumat, Hospital Raja Permaisuri Bainun, Perak* | Perak |

*Source : Oral Health Programme, MOH 2020*

The Oral Health Programme is proud to acknowledge the eight (8) dental innovation projects from three (3) categories which were shortlisted and chosen out of 44 innovation projects to compete in the final stage of AIKKM 2020 as below:

**Product Innovation Category**

- Swift – *Bahagian Kesihatan Pergigian Perlis*
- Easy Clean – *Klinik Pergigian Alor Setar, Kedah*
- Dwi Baby Trolley - *Jabatan Pergigian Pediatrik, Hospital Sultanah Bahiyah, Alor Setar*
- Vaportect - *Klinik Pergigian Kuala Lumpur*
- i-Respro Powered Air Purifying Respirator (PAPR) - *Jabatan Bedah Mulut & Maksilofasial, Hospital Sultan Haji Ahmad Shah*
- Cast Accelerator - *Pejabat Kesihatan Pergigian Daerah Besut*

**Process Innovation Category**

- Electric Scrapper – *Pejabat Kesihatan Pergigian Daerah Kuala Kangsar*

**Technology Innovation Category**

- Electronic Dental Consent – *Bahagian Kesihatan Pergigian Wilayah Persekutuan Kuala Lumpur & Putrajaya*

- **National Oral Health Quality Convention 2020**

The National Oral Health Quality Convention 2020 was officiated by *YBrs.* Dr Doreyat bin Jemun, Principal Director of Oral Health Programme, Ministry of Health (OHPMOH), Malaysia. It was held from 9 to 10 March 2020 at the Summit Hotel, Subang Jaya, Selangor and marked a significant step forward in our pursuit of innovation, creativity and quality. This event may be the last of large scale national events organised by OHP, MOH before the onslaught of COVID-19 and the first Movement Control Order (MCO) on 18 March 2020.

- **MyPortfolio**

MyPortfolio is an official reference document that contains important information related to the organisation namely; job descriptions, functions, activities, procedures and work processes. Therefore, MyPortfolio serves as a practical and useful guide in executing tasks.
In 2018, the Malaysian Administrative Modernization and Management Planning Unit (MAMPU) issued *PKPA Bil. 4 Tahun 2018 MyPortfolio: Panduan Kerja Sektor Awam* and this circular was released as a new approach towards implementation of duties and responsibilities in a more comprehensive and orderly manner in government agencies. Heads of Departments can also widely use myPortfolio as a strategic tool in human resource management.

In 2020, an audit was conducted to ensure that the implementation of myPortfolio in OHP complied with this circular. 13 documents were audited and 20 elements were reviewed. Out of these 20 items, 10 failed to comply with the set standards. OHP will continue to improve and enable complete implementation of MyPortfolio to ensure full compliance in future. MyPortfolio also complements the documentation required under Quality Management System ISO 9001:2015.

- **Conducive Public Sector Ecosystem (EKSA)**

MAMPU has taken the initiative to enhance the implementation of the 5S Practice which has been rebranded as Conducive Public Sector Ecosystem (EKSA). This move is in line with efforts to strengthen a high-performing and innovative organisational culture among public sector agencies through the provision of environmental, workplace culture and values.

In OHP, the implementation of EKSA practices continues to be strengthened and improved. New members of OHP will attend in-house briefing on the implementation of EKSA apart from the training organised by the EKSA Training Committee, MOH.

All EKSA *IPKKM* audits planned for 2020 were postponed due to the impact of COVID-19. This is because many divisions in IPKKM are directly involved with the handling of COVID-19. All in all, this audit is to be conducted in 2021 as a preparatory step to renew the EKSA IPKKM certification by MAMPU which will expire on 14 February 2021.

# CONCLUSION AND WAY FORWARD

The COVID-19 pandemic has impacted the delivery and performance of oral healthcare services compared to year 2019. As of 31 August 2020, only 88 percent of the primary dental clinics were operating and these exclude the Urban and Rural Transformation Center (UTC and RTC) and visiting clinics. Meanwhile, all specialist dental clinics were operating throughout the Movement Control Order (MCO) period. The coveragefor most target groups which include preschool children, primary and secondary schoolchildren, antenatal mothers and the elderly has declined quite significantly as compared to the previous year.

Constraints of space to screen and isolate patients and lack of proper equipment such as high vacuum suction unit and air filter causes great difficultie services to the patients, particularly the Aerosol Generated Procedures (AGPs) which are routinely performed in the clinic. As most dental procedures are being done in close proximity to patients, this puts all oral health personnel at higher risk of infection.

Besides providing equipments to existing facilities, the best design for future new facilities was also identified. One of the recommendation is that, all new facilities will be designed with a separate room for each Dental Chair Cum Unit and equipped with a ventilation system that has the concept of one-way airflow from staff to patient and out of the treatment room.

As COVID-19 pandemic is an unprecedented situation, guidelines on the management and control of the risk of the COVID-19 virus infection has to be developed fast. At the beginning of the pandemic, treatment offered was mainly restricted to dental emergency only. However as more evidence on the management of COVID-19 in dental scenario became available, oral healthcare services are now slowly resuming with the new norms and adaptations.

Social media and online were identified as the best method during pandemic to deliver oral health education and promotion activities. However, empowerment activities such as iGG programme is still relevant for rural communities or in areas where ICT and internet coverage is not available. For schoolchildren, the BEGIN training programme will be one of the main activities in the future to control gum disease and dental caries among the children.

Slow trending of caries improvement, increasing trend of periodontal disease and late stage of oral cancer detection were some of the major issues and challenges identified in 2020. Finding form the National Health Morbidity Survey, 2019 whereby only 23.7 percent of the population has a dental visit within the last 12 months worsen the situations. With the MCO and new norms practice due to the COVID-19 pandemic, utilisation rate was even more affected.

During this pandemic, application of ICT and other related technologies is essential to help improve the access, efficiently, effectiveness and quality of the services provided by the oral health personnel. Thus, implementation of online appointment system, tele-dentistry and electronic medical record is timely in this pandemic era.

There is now broad recognition that oral health shares the same social determinants and risk factors with other Non-Communicable Diseases. Hence, oral health personnel has an opportunity to actively participate in efforts to improve patient's overall health by taking on new tasks such as screening for and monitoring of non-communicable diseases (e.g. glycemic control).

To ensure sustainability of oral healthcare delivery, oral health must be included in all policies. This require engagement with leaders and policy-makers at all levels either local, regional, national and global. By emphasizing the governmental objectives are best achieved when all sectors include health and wellbeing as key components of policy development, the position of oral health can be strengthen. Advocating oral health in all policies will help increase oral health literacy and awareness among the public, thereby supporting a community-driven demand of governments for better access to oral healthcare services.

Slow trending of caries improvement, increasing trend of periodontal disease and late stage of oral cancer detection were some of the major issues and challenges identified in 2020. Finding from the latest National Health Morbidity Survey, 2019 whereby only 23.7 per cent of the population has a dental visit within the last 12 months was also disturbing and worrisome. The utilisation trend was even more affected with the restriction movement and the new norms practice in dental facilities due to the COVID-19 pandemic.

Application of internet and other related technologies by the oral health personnel is essential to help improve the access, efficiency, effectiveness and quality of the services provided to patients. Thus, the implementation of online appointment system, tele-dentistry and electronic medical record is timely in this pandemic era.

There is now broad recognition that oral health shares the same social determinants and risk factors with other Non-Communicable Diseases (NCDs). This means that oral health cannot be dealt with in isolation from other health issues. Hence, oral health personnel has an opportunity to actively participate in efforts to improve patients' overall health by taking on new tasks such as screening for and monitoring of non-communicable diseases (e.g. glycemic control) which can lead towards stronger integration into the overall health system.

Fluctuations in socio-economic circumstances have a significant impact on oral healthcare resources and policies. In times of economic hardship, resources tend to be drawn from oral healthcare and redirected towards areas and diseases where lack of treatment leads to faster and more visible consequences, notably mortality. Conversely, economic upturns tend to foster an increase in demand that must be met. To ensure sustainability of oral healthcare delivery, oral health must be included in all policies which require engagement with leaders and policy-makers at all levels either local, regional, national and global.

By emphasizing that governmental objectives are best achieved when all sectors include health and wellbeing as key components of policy development, the position of oral health can then be strengthen. Advocating Oral Health in All Policies will help increase oral health literacy and awareness among the public, thereby supporting a community-driven demand of governments for better access to oral healthcare services.

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