ANNUAL REPORT 2012
ORAL HEALTH DIVISION
MINISTRY OF HEALTH MALAYSIA

MOH/K/GIG/15.2013

ANNUAL REPORT

2012

ORAL HEALTH DIVISION
MINISTRY OF HEALTH MALAYSIA

Disember 2013

Contents

FOREWORD
PRINCIPAL DIRECTOR FOR ORAL HEALTH
MINISTRY OF HEALTH MALAYSIA

I take this opportunity to thank all personnel of the Oral Health Programme for their contribution and commitment towards improving oral healthcare for the nation. Much emphasis has been directed towards enhancing equity and accessibility to care through outreach services. As in the past, much attention has also been given to human capital development towards realising the goals of our organization.

Oral healthcare for adults and the elderly was given special attention in 2012. Complementing the outreach services, the 1Malaysia Mobile Dental Clinic from 1Malaysia Development Berhad was officially launched by the Minister of Health, the Honourable Dato' Sri Liow Tiong Lai on 24 May 2012 in Kuala Lipis, Pahang. In addition, dental clinics were established in two Urban Transformation Centres (UTCs) and two Rural Transformation Centres. Through these NBOS initiatives, the Finance Ministry provides the infrastructure and equipment, and the MOH provides the manpower and services. The dental clinics in Melaka and Pudu Sentral UTCs now operate from 8.00 am to 10.00 pm daily except for public holidays.

Access to oral healthcare was also improved through daily outpatient services in more dental clinics. This became a Key Performance Indicator (KPI) for the Minister of Health as well as for the programme. The MOH also embarked on expanding the scope of services at primary care level with the introduction of endodontic services in 21 identified clinics. Overall, a total of 7,265,752 people utilised the oral health services in 2012 with dental visits in excess of 10,242,420 visits.

With the move towards centralised asset management in MOH facilities, asset tagging was conducted under the Medical Equipment Enhanced Tenure (MEET) for primary care dental clinics.

The Dental Bill was the first Bill to be posted online for public engagement in August 2012. Engagement of the dental fraternity and other stakeholders

followed in preparation for the Bill to be sent to the MOH Legal Advisor and then to the Attorney-General's Chambers. The aim is for the Dental Bill to be tabled in parliament in 2013.

Focus was also given to dental auxiliaries in 2012. The Program moved for better career pathway for Dental Surgery Assistants and re-looked the need for degree programmes for dental nurses and technologists. There was much soul-searching on the affairs of manpower in 2012. With an unprecedented increase in the number of new dental officers reporting for compulsory service, the Programme mooted the successful reduction of compulsory service from 3 to 2 years. This became effective from 5 February 2012 onwards with the approval of the Minister of Health. There was a reversal of policy from the 2-year Dental Professional Development Programme back to the 1-year First-Year Dental Officer (FYDO) Programme. After the first year, new dental officers were posted to community clinics where they are needed.

For the first time, the Programme engaged other members of the fraternity to formulate post-study recommendations for the NOHSA 2010. The NOHSA 2010 Seminar was successfully conducted with the aim of sharing the findings and harnessing input from the profession.

Once again, I convey my heartfelt gratitude to all in the oral healthcare network of the MOH for having remained dedicated and steadfast to ensure the smooth delivery of oral healthcare for the *rakyat*. Let us forge ahead to achieve our vision.

A Nation Working Together for Better Health.

Dr Khairiyah binti Abd Muttalib
Principal Director of Oral Health
Ministry of Health Malaysia

HIGHLIGHTS 2012

1. Launch of the 1Malaysia Mobile Dental Clinic, 24 May 2012

Dato' Sri Liow Tiong Lai, the Honourable, Minister of Health Malaysia launched the 1Malaysia Mobile Dental Clinic on 24 May 2012 at Jubli Perak Hall in Kuala Lipis, Pahang. The 1Malaysia Mobile Dental Clinic was presented to the Oral Health Programme, Ministry of Health (MOH) by the 1Malaysia Development Berhad *(Yayasan* 1MDB).

2. Courtesy Visit to MINDEF, 28 June 2012

The courtesy call to the Dental Corp, Ministry of Defence (MOD) was led by the Principal Director of Oral Health on 28 June 2012. The group was given a warm reception by the Director of the Armed Forces, Major General Dato' Dr. Sukri Hussin and dental comrades-in-arms at the *Pusat Pergigian Angkatan Tentera Malaysia.* The visit provided an opportunity to view two innovations by the Dental Corp - the Mobile Dental Bus 'Canine' and the portable dental cutting unit 'Compact and Tough' (CAT). The visit heralded further collaboration between MOH and the MOD.

3. Seminar on Developing Effective Oral Health Promotion Materials, 9-11 July 2012

The Seminar on *Developing Effective Oral Health Promotion Materials* was conducted at Avillion Admiral Cove, Port Dickson from 9-11 July 2012. Invited speakers were from the Institute of Behavioural Science and Health Education Division, MOH. Topics included *Designing Effective Oral Health Messages* and *Aesthetics and Graphics in Production of Health Education Materials*. A total of 45 dental nurses from the states and the Childrens' Dental Centre and Dental Training College Malaysia attended the seminar.

HIGHLIGHTS 2012

4. National Innovation Awards, Ministry of Health 17-19 July 2012

The annual National Innovation Awards for MOH was held from 17-19 July 2012 at the De Palma Hotel Ampang, Selangor. The Principal Director of Oral Health officiated the event. A total of 49 entries were showcased. The project *Teknik Penghasilan Prostesis yang Cekap, Tepat dan Selamat* from the Oral and Maxillofacial Surgery Clinic, Sultanah Nur Zahirah Hospital, Kuala Terengganu won 1st place in the 'process' category, while *Maxillofacial Extra-oral Tray* from the Oral and Maxillofacial Surgery Clinic, Sarawak General Hospital, Kuching won 3rd place in the 'product' category.

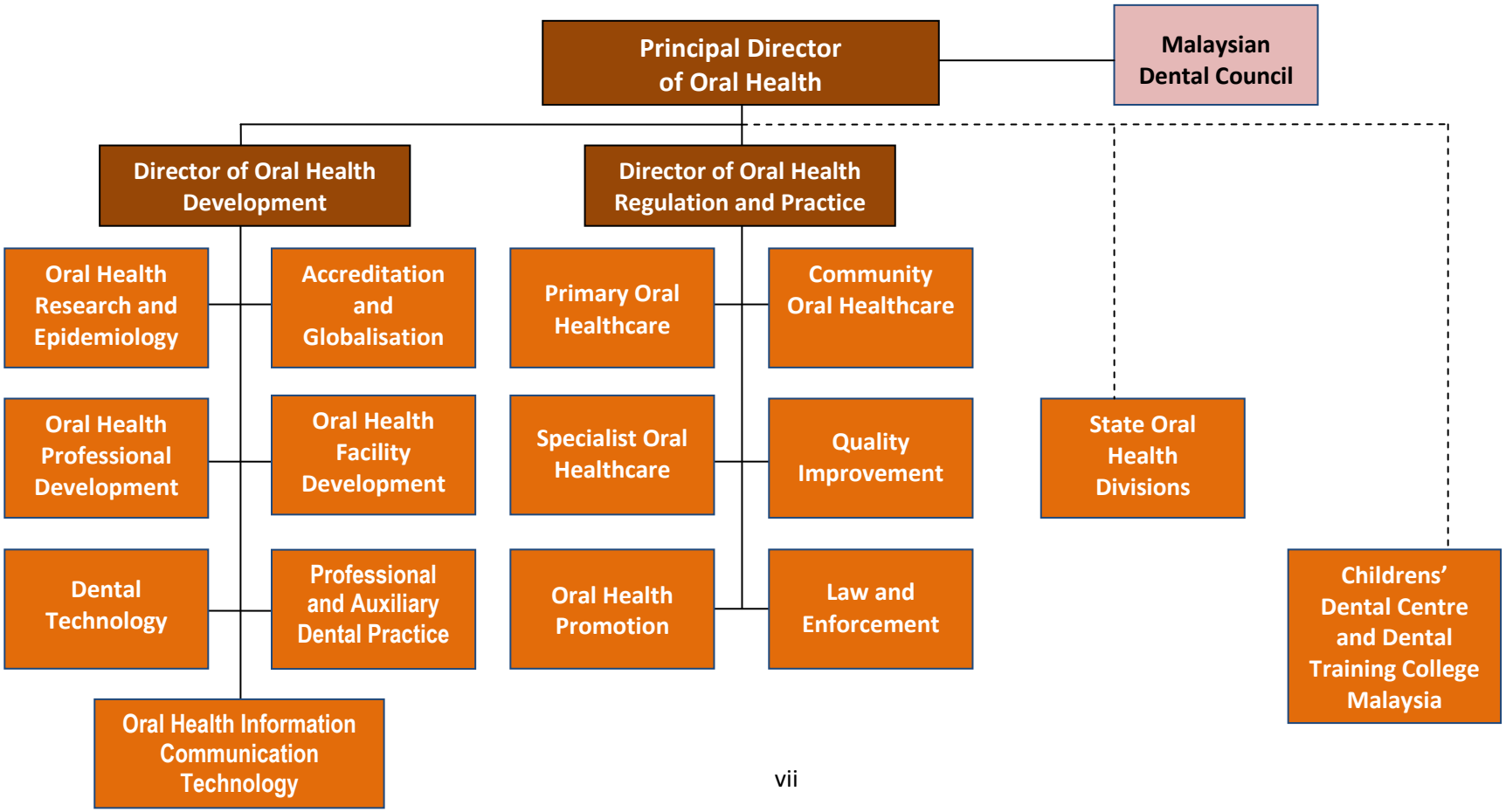
5. Seminar NOHSA 2010, 7-10 November 2012

The NOHSA 2010 Seminar was conducted on 7-10 November 2012 at the Holiday Villa Hotel & Spa, Selangor. The seminar involved 77 participants from various agencies; 13 presentations were made on NOHSA 2010 findings. The objectives were to share and disseminate the findings, and to engage dental stakeholders for formulating post-study recommendations.

6. Mouth Cancer Awareness Week, 13-19 November 2012

The Mouth Cancer Awareness Week on 13-19 November 2012 was launched by the Principal Director for Oral Health, MOH at Taman Tasik, Shah Alam on 13 November 2012. The aim was to increase oral cancer awareness among health professionals and the public. All MOH dental facilities were encouraged to hold Mouth Cancer Awareness activities during the week. Overall 24,455 people were screened, 6,113 were counselled on risk habits and 463 attended awareness campaigns and 678 were given health education talks. In addition, 4 radio slots were held to increase awareness on Mouth Cancer to the public.

ORGANISATION STRUCTURE
ORAL HEALTH DIVISION, MINISTRY OF HEALTH MALAYSIA



PROFESSIONAL AND TECHNICAL STAFF

Front Row:

Dr Salmiah bt. Bustanuddin, Dr Rusni bt.Mohd. Yusoff, Dr Yaw Siew Lian, Dr Noor Aliyah bt.Ismail, Dr Khairiyah bt. Abd Muttalib, Dr N. Jegarajan, Datin Dr Nooral Zeila bt. Junid, Dr Savithri a/p Vengadasalam, Dr Doreyat bin Jemun

Middle Row:

Dr Rohayati bt. Mohd Noor, Dr Norlida bt. Abdullah, Dr Nurrul Ashikin bt. Abdullah, Dr Suhana bt. Ismail, Dr Zurina bt. Abu Bakar, Dr Norliza bt. Ismail, Dr Noormi bt.Othman, Dr Tan Ee Hong, Dr Che Noor Aini bt.Che Omar, Dr Elise Monerasinghe, Dr Cheng Lai Choo, Dr 'Atil Athirah bt. Supri, Dr Azliza bt. Dato'Zabha, Dr Siti Zuriana bt.Mohd Zamzuri

Back Row:

Dr Noor Akmal bt.Muhamat, Dr Norashikin bt. Mustapa Yahya, Dr Haznita bt.Zainal Abidin, Cik Khairulbariah bt. Mohammad Lukman, Dr Natifah bt. Che Salleh, Dr Faizah bt. Kamaruddin

Not in Picture:

Dr Fekriah bt. Mohd. Yatim, Dr Chew Yoke Yuen, Dr Mohd Rashid bin Baharon, Dr Chu Geok Theng, Dr Zainab bt Shamdol, Dr Mustaffa bin Jaapar, Dr Sofiah bt. Mat Ripen, Dr Nuryastri bt. Md. Mustaffa, Dr Nor Azlina bt. Hashim, Dr 'Ainun Mardhiah bt. Meor Amir Hamzah, Dr Siti Kamilah bt. Kasim, Dr Raja Noor Shazleen bt. Raja Dzulkifli

DENTAL NURSES AND DENTAL TECHNOLOGISTS

Front Row:

Cik Kung Siew Gaik, En Abd. Rahaman bin Jaafar, Dr Khairiyah bt. Abd Muttalib, Pn Fatimah bt. Rahman, Cik Hayati bt. Mohd Yasin

Back Row:

Pn Sarina bt. Othman, Pn Norliza bt. Jamalludin, Pn Farizah bt Arshad, Pn Haziah bt. Hassan, Pn Fazida bt. Buyong, Pn Zabidah bt. Othman

Not in Picture:

En Sularso bin Mohd. Yusof, Pn Noraini bt. Yaacob, Pn Zauwiyah bt. Md. Wazir, Pn Cheng Chue Chu, En Mohd Tohir bin Ibrahim, Pn Sulhana bt. Ismail, Pn Julaiha bt. Mohd Sarif

ADMINISTRATIVE STAFF

Front Row:
Pn Suriyanti bt. Sudin, Pn Mastura bt. Mohd. Amin, Pn Halimah bt. Abu Kassim, Pn Suzana bt. Ahmad, Dr Khairiyah bt. Abdul Muttalib, En Muhammad Nasrul bin Mohd Sati, En Hidzer bin Harun, En Azman bin Alias, Pn Rosyatimah bt. Redzuan

Middle Row:
Pn Rahanah bt. Mat Nor, Pn Nurul Ashikin bt. Muhamad, Cik Nur Syhida bt. Hamzah, Pn Nurulliyana bt Mohd Don, Cik Zatun Nakia bt. Mahmud, Pn Siti Almaisarah bt. Abdullah, Pn Nik Iwani bt Nik Mohd Azami, Pn Azlina bt. Linggam, Cik Nora Seelawati bt. Zahari, En Mohamad Agil bin Mohamad Yusoff

Back Row:
Pn Rosilawani bt. Ismail, Pn Norulhuda bt. Ghazali, En Mohamad Hakim bin Saman, En Mohd Raszali bin Mahmud, Pn Nor Atika Anisa bt. Mohd Ali, Cik Nor Azimah bt. Abd Manab

Not in Picture:
En Ganesan a/l D Karuppiah, Pn Kamariah bt. Ibrahim, Cik. Zahratul Aini bt. Parman, Pn Umi Kalsom bt. Azmi, En Mohd Fadzil bin Hamzah, Pn Rozita bt. Mohamad Tahir, Pn Fadiana bt. Jusoh, Pn Fazlina bt. Abdullah Sani, Pn Ismalisa bt. Ismail, Pn Juhaida bt. Ibrahim, En Yusrizal bin Mohd Yusof, Pn Wan Ismawati bt. Wan Yusof, En Raymond Anak Renges, En Hasan bin Harun, En Muhammad Fuadht bin Shahrudin, En Mohd Sabre bin Omar

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 centred
- innovative

With emphasis on:

- professionalism, caring and teamwork value
- respect for human dignity
- community participation

Mission of the Oral Health Division

To enhance the quality of life of the population
through the promotion of oral health
with emphasis on patient-centred care and
the building of partnerships for health

Resource Management

Financial Resource Management
Human Resource Management
Facilities Management

FINANCIAL MANAGEMENT

1. Financial Management at Programme Level

In 2012, the Oral Health Programme Ministry of Health Malaysia received a total allocation of RM516,756,273.00. However, RM612,516,840.00 (118.5%) was spent at the end of the year under the following activities:

a. *Dasar Sedia Ada*
b. *Dasar Baru*
c. *One-off*
d. *Latihan Dalam Perkhidmatan*

Majority of the allocation was under *Dasar Sedia Ada* (RM509,394,305.00). Expenditure under this activity included administration (code 050100), primary oral healthcare (code 050200), community oral healthcare (code 050300), and specialist care (code 050400).

The expenditure in decreasing amount were in the order of *Dasar Sedia Ada*, One-off, *Dasar Baru* and *Latihan Dalam Perkhidmatan* **(Table 1)**

Table 1: Budget Allocation and Expenditure for Oral Health Programme MOH, 2012

Activity	Object Code	Initial Allocation (RM)	Final Expenditure (RM)	Expenditure (%)
Dasar Sedia Ada	050000	509,394,305	605,216,440	118.8
Dasar Baru	100500	2,096,513	2,065,350	98.5
One-off	110100	2,665,455	2,663,058	99.9
Latihan Dalam Perkhidmatan	001050	2,600,000	2,571,992	96.7
TOTAL	**-**	**516,756,273**	**612,516,840**	**118.5**

Source: Oral Health Division, MOH 2012

2. Financial Management at the Oral Health Division

The financial allocations for the Oral Health Division (OHD) were from the following sources:

- Operating budget for administration and assets under the oral health programme (Financial Codes 50100 and 50200)
- Operating budget under the administrative programme:
  - Implementation of MS ISO 9001 (activity heading 010300)
  - Implementation of MOH Innovation Awards (activity heading 010100)
- Development funds under the 10th Malaysia Plan (10MP):
  - Training (activity heading 00105).

In 2012, the OHD received RM3,247,348.80, of which 95.3% (RM3,095,514.41) was spent **(Table 2).** The operating budget under financial codes 050100 and 050200 included the operating costs for the Division and the Malaysian Dental Council (MDC) and activities at Ministry level. Expenditures included the day-to-day running of the Division and its activities and management of Council Meetings, Council Inquiries, Pre-Investigation Committee (PIC) meetings and professional fees for legal advisors.

Table 2: Budget Allocations and Expenditures, Oral Health Division, MOH, 2012

Activity Heading	Object Code	Initial Allocation (RM)	Total Amount Received (RM)	Final Expenditure (RM)	% Expenditure
050100 (Administration)	10000	30,000.00	30,000.00	27,173.12	90.58
050100 (Administration)	20000	1,080,000.00	1,249,000.00	1,231,997.45	98.64
050100 (Asset)	35000	23,500.00	383,835.00	383,835.00	100.00
050200 (Primary Care)	20000	227,000.00	227,000.00	212,565.88	93.64
100500 (*Dasar Baru)*	20000	800,000.00	196,513.80	167,300.29	85.13
010300 (ISO)	20000	30,000.00	20,000.00	19,985.00	99.93
010100 (Innovation)	20000	130,000.00	130,000.00	116,149.67	89.35
00105 (Training)	-	830,000.00	1,011,000.00	936,508.00	92.63
TOTAL		**3,150,500.00**	**3,247,348.80**	**3,095,514.41**	**95.32**

Source: Oral Health Division, MOH 2012

The allocation of RM196,513.80 for *Dasar Baru* was mainly for MDC operating costs which included lawyers' fees and renovation costs of the intended MDC office in Jalan Cenderasari.

The MS ISO 9001:2008 fund of RM20,000.00 was used for external auditor fees and training. The training sessions were for internal quality auditors and other quality-related courses for all categories of personnel in the OHD and at state level.

Development funds of RM1,011,000.00 under the 10MP were received for *Latihan Dalam Perkhidmatan* (LDP). Under the LDP, training included continuing professional development (CPD) activities for personnel at the division, state and district levels.

3. Monitoring State Financial Matters

The OHD also monitors allocations and expenditures at state level. In 2012, under *Dasar Sedia Ada,* Sarawak received the highest allocation, followed by Selangor and Perak. All states spent more than their allocations, with Kelantan being the highest (125.1%), followed by Sabah (124.4%) and Pahang (122.7%) **(Table 3).**

Table 3: Budget Allocations and Expenditures under *Dasar Sedia Ada* by State and Institution, 2012

State	Initial Allocation (RM)	Final Expenditure (RM)	Expenditure (%)
Perlis	12,503,500.00	13,388,217.19	107.1
Kedah	35,349,300.00	43,268,730.00	122.4
Pulau Pinang	30,448,182.55	35,770,445.18	117.5
Perak	47,951,100.00	57,434,111.86	119.8
Selangor	49,890,957.00	58,692,713.76	117.6
Negeri Sembilan	29,227,932.00	35,082,624.74	120.0
Melaka	22,928,513.30	26,997,259.17	117.8
Johor	44,098,550.00	51,984,537.28	117.9
Pahang	35,787,090.00	43,914,372.88	122.7
Terengganu	30,329,007.49	36,735,204.95	121.1
Kelantan	34,393,000.00	43,014,756.86	125.1
Sabah	45,234,507.89	56,275,118.85	124.4
Sarawak	53,508,640.00	59,849,246.84	111.9
WP KL & Putrajaya	31,304,935.00	36,292,202.18	115.9
WP Labuan	2,641,581.00	2,825,685.90	107.0
OHD, MOH	1,859,835.00	1,828,398.33	98.3
KLPM	390,000.00	433,084.63	111.1
HKL	1,547,674.00	1,429,730.06	92.4
TOTAL	**509,394,305.23**	**605,216,440.66**	**118.8**

Source: Oral Health Division, MOH 2012

HUMAN RESOURCE MANAGEMENT

Oral health personnel in the Ministry of Health consists of dental officers (including dental specialists), dental auxiliaries (dental nurses, dental technologists, dental surgery assistants), attendants, training staff (at the Childrens' Dental Centre and Dental Training College Malaysia) and support staff (includes administrative staff and drivers). In 2012, there were 13,313 posts for oral health personnel in the Ministry of Health **(Table 4).**

1. Composition of Oral Health Work Force

Out of the 13,313 posts, 12,370 (92.9%) were filled. There were 2,719 dental officers' posts in 2012, of which only 58 (9.5%) were unfilled. The Oral Health Programme had addressed the need for tutors at the Childrens' Dental Centre and Dental Training College Malaysia. This greatly decreased the vacancies of dental nurse tutors from 73.8% to 26.0% and dental technologist tutors from 64.7% to 29.5% in 2012 **(Table 4).**

2. New Posts

A total of 652 new posts were approved in 2012. The bulk of new posts were for dental officers (500) and dental surgery assistants (113) **(Table 5).**

3. Distribution of Dental Officers and Dental Specialists

In 2012, 92.1% of dental officers' posts and 72.5% of clinical dental specialists' posts were filled. A higher percentage of vacancies for dental officers' posts were seen in FT Labuan while for Clinical Dental Specialists the vacancies were highest in Sarawak **(Table 6).**

Table 4: Oral Health Personnel in MOH, 2008-2012

CATEGORY	2008			2009			2010			2011			2012		
	Post	Filled	% Vac	Post	Filled	% Vac	Post	Filled	% Vac	Post	Filled	% Vac	Post	Filled	% Vac
*Dental Officer	2,429	1,507	38.0	2,680	1,597	40.4	2,925	1,781	39.1	2,219	2,094	5.6	2,719	2,461	9.5
Dental Nurse (Tutor)	41	12	70.7	41	12	70.7	41	10	75.6	42	11	73.8	42	11	26.0
Dental Nurse	2,635	2,319	12.0	2,731	2,447	10.4	2,803	2,513	10.3	2,803	2,562	8.6	2,815	2,574	8.6
Dental Technologist (Tutor)	17	6	64.7	17	6	64.7	17	6	64.7	17	6	64.7	17	5	29.5
Dental Technologist	866	696	19.6	916	731	20.2	933	745	20.2	937	815	13.0	943	858	9.0
Dental Surgery Assistant	3,300	2,722	17.5	3,376	2,820	16.5	3,422	2,947	13.9	3,474	3,173	8.7	3,583	3,422	4.5
Health Attendant	1,960	1,850	5.6	2,074	1,957	5.6	2,219	2,100	5.4	2,258	2,100	7.0	2,269	2,179	4.0
Driver	839	781	6.9	848	805	5.1	860	838	2.6	915	837	8.5	925	860	7.0
TOTAL	**12,087**	**9,893**	**18.2**	**12,683**	**10,375**	**18.2**	**13,220**	**10,940**	**17.2**	**12,665**	**11,598**	**8.4**	**13,313**	**12,370**	**7.1**

Source: Oral Health Division, MOH 2012
**Including Dental Specialists*
Vac= vacancy

Table 5: New Posts Approved, 2012

Category of Personnel	No. of Posts Approved
Dental Officer Grade U41/44/48/52/54	500
Dental Nurse Grade U29/U32	12
Dental Technologist Grade U29/U32	5
Dental Surgery Assistant Grade U17/U22	110
Dental Surgery Assistant Grade U24	3
Pembantu Tadbir (P/O) N17/N22	12
Pembantu Perawatan Kesihatan Gred U3/U12	5
Pemandu Kenderaan Bermotor R3/R6	5
TOTAL	**652**

Source: Oral Health Division, MOH 2012

Table 6: Distribution of Dental Officers and Clinical Dental Specialists by Region, 2012

Region	*Dental Officer			*Clinical Dental Specialist		
	Post	Filled	% Vac	Post	Filled	% Vac
Pen Malaysia	2032	1888	7.12	193	146	24.4
Sabah	205	196	4.4	11	8	27.3
FT Labuan	11	5	54.6	0	0	0
Sarawak	249	211	15.3	18	7	61.1
Total	2497	2300	7.9	222	161	27.5

Source: Oral Health Division, MOH 2012
Vac= vacancy
**Inclusive of Simpanan Dalam Latihan & contract posts for Malaysians*

4. Promotion Exercise

A total of 281 dental officers from various grades were promoted. These included two administrative posts for Grades B and C, and clinical dental specialists from various disciplines **(Table 7).**

Table 7: Promotion of Dental Specialists and Dental Officers, 2012

Discipline	Grades								Total
	KHAS B	*KHAS* C	*JUSA* B	*JUSA* C	U54	U52	U44	U48	
Oral Surgery	0	0	0	0	4	0	0	0	**4**
Orthodontics	0	0	0	0	3	3	0	0	**6**
Paediatric Dentistry	0	0	0	0	0	1	0	0	**1**
Oral Pathology and Oral Medicine	0	0	0	0	1	0	0	0	**1**
Periodontics	0	0	0	0	0	0	0	0	**0**
Restorative Dentistry	0	0	0	0	0	0	0	0	**0**
Forensic Odontology	0	0	0	0	0	0	0	0	**0**
Special Needs Dentistry	0	0	0	0	1	0	0	0	**1**
Administrative/ Clinical Dental Officer	0	0	1	1	7	38	100	121	**268**
Total	**0**	**0**	**1**	**1**	**16**	**42**	**100**	**121**	**281**

Source: Oral Health Division, MOH 2012

In addition, 256 dental auxillaries from various categories were promoted to higher grades **(Table 8).**

Table 8: Promotion of Dental Auxiliaries, 2012

Category	Grade								
	U40	U38	U36	U32	KUP U32	U29	U24	U22	TOTAL
Dental Nurse	0	0	16	24	115	0	0	0	**155**
Dental Technologist	1	1	13	25	33	0	0	0	**73**
Dental Surgery Assistant	0	0	0	0	0	0	28	0	**28**
Total	**1**	**1**	**29**	**49**	**148**	**0**	**28**	**0**	**256**

Source: Oral Health Division, MOH 2012

5. Dental Specialties in the Ministry of Health

The nine dental specialties recognised by the Public Service Department are Oral Surgery, Orthodontics, Periodontology, Paediatric Dentistry, Oral Pathology/Oral Medicine, Restorative Dentistry, Special Needs Dentistry, Forensic Dentistry and Dental Public Health. There has been a gradual increase in dental specialists in the various disciplines from 2009 onwards. In 2012, there were 277 dental specialists in MOH, of which 161 were Clinical Dental Specialists and 116 Dental Public Health Officers **(Table 9).**

Table 9: Distribution of Dental Specialists in MOH by discipline, 2009-2012

Discipline	2009	2010	2011	2012
Oral Surgery	45	45	45	48
Orthodontics	30	32	25	34
Periodontics	18	19	20	21
Paediatric Dentistry	25	25	27	29
Oral Pathology / Oral Medicine	6	8	9	9
Restorative Dentistry	14	14	16	17
Special Needs Dentistry	0	0	0	2
Forensic Dentistry	0	0	0	1
Dental Public Health	129	129	118	116
Total	**267**	**272**	**260**	**277**

Source: Oral Health Division, MOH 2012

6. Nett Gain/Loss of Dental Officers

Overall, there has been an increasing trend in dental officers joining the MOH from 2008 to 2012. Attrition was highest in 2010 and 2011 mostly due to resignation. Other reasons for attrition include compulsory and optional retirements and release with permission. In 2012, there was a nett gain of 418 dental officers in MOH (**Table 10).**

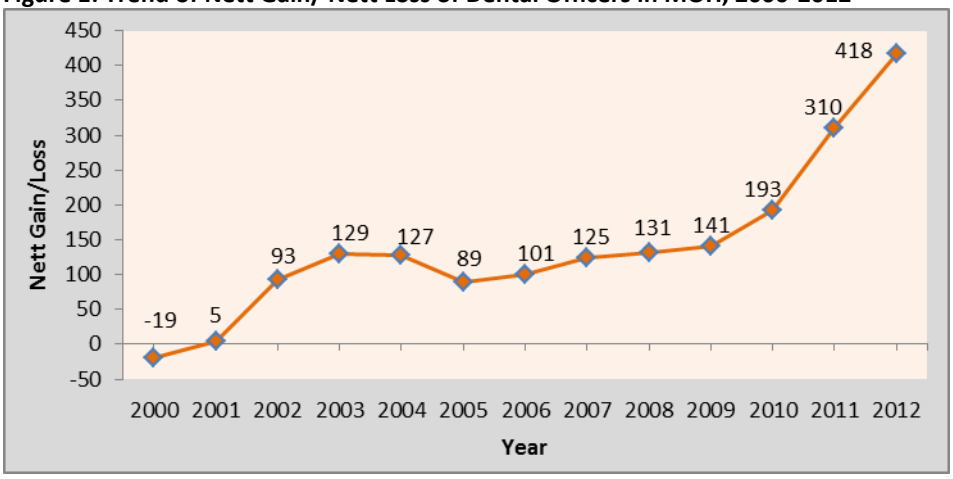
Table 10: Nett Gain and Loss of Dental Officers in MOH, 2008-2012

SUBJECT	2008	2009	2010	2011	2012
Nett gain					
Reported for Duty	215	222	297	415	514
Attrition					
Retired (Compulsory)	9	2	10	13	3
Retired (Optional)	0	2	5	2	3
Resigned	54	54	72	82	89
Released with Permission	20	23	16	7	0
Other Reasons	1	0	1	1	1
Nett loss	**84**	**81**	**104**	**105**	**96**
Total (Nett gain / net loss)	**131**	**141**	**193**	**310**	**418**

Source: Oral Health Division, MOH 2012

The reactivation of compulsory service in June 2001 has led to a nett gain of dental officers in the public sector from 2001 to 2004. Henceforth, there has been a significant increase in the number of dental officers joining the MOH due to an increase in the number of graduates from local dental faculties (**Figure 1**).

Figure 1: Trend of Nett Gain/ Nett Loss of Dental Officers in MOH, 2000-2012



Source: Oral Health Division, MOH 2012

7. Contract Dental Officers

Malaysians or non-citizens who fulfil specific requirements have been employed as dental officers on contract basis. Cabinet approval on the employment of non-citizens as contract dental officers was obtained on 9 January 2002.

In 2012, 36 Malaysians and 34 non-citizens were employed as contract dental officers in the MOH **(Table 11)**. However, the policy on employment of contract dental officers was amended in 2012 as follows:

- No recruitment of non-citizen contract dental officers
- No extension of existing contracts for non-citizens
- Postponed recruitment or no extention of existing contract for non-specialist dental officers
- Appointments of contract dental specialists are based on need in MOH

Table 11: Recruitment of Contract Dental Officers in MOH, 2010-2012

YEAR	MALAYSIAN CITIZEN						NON-CITIZEN					
	Retiree			Non Retiree			Non Spouse			Spouse		
	P	F	V (%)	P	F	V (%)	P	F	V (%)	P	F	V (%)
2010	80	39	51.3	0	0	0	80	43	46.0	20	15	25.0
2011	80	37	53.8	0	0	0	80	35	56.0	20	12	40.0
2012	80	36	55.0	0	0	0	80	24	70.0	20	10	50.0

Source: Oral Health Division, MOH 2012
P=post, F=filled, V=vacant

FACILITIES MANAGEMENT

Dental facilities are located in health clinics, hospitals, primary and secondary schools as well as institutions. Besides this, outreach dental services are available via mobile dental clinics and mobile dental teams.

In 2012, there were 2,169 dental facilities equipped with 4,703 dental units throughout Malaysia **(Table 12).** Under the National Blue Ocean Strategy (NBOS) initiatives, four 1Malaysia dental clinics were established (two in Urban Tranformation Centres and two in Rural Transformation Centres).

A new mobile dental clinic (KPB1M) was received from Yayasan 1Malaysia Development Berhad to complement the existing outreach services. This mobile clinic is based in Kuala Lipis to serve the population in and around the neighbouring districts.

The official launch of the *Klinik Pergigian Bergerak 1Malaysia* in Kuala Lipis, Pahang on 24 May 2012

Table 12: Oral Health Facilities in MOH, 2012

TYPE OF FACILITY	NUMBER OF FACILITIES	NUMBER OF DENTAL UNITS
Stand-alone Dental Clinic	50*	441
Dental Clinic in Health Centre	571	1328
Dental Clinic in Hospital	65	342
School Dental Clinic	929	847
Mobile Dental Clinic	27	44
1Malaysia Dental Mobile Clinics (Bus)	1	1
Dental Clinic in 1Malaysia Clinics • Urban Transformation Centre (UTC) • Rural Transformation Centre (RTC)	 2 2	 2 0
Mobile Dental Team • School Mobile Dental Team (Primary and Secondary Schools) • Pre-School • Elderly & Special Needs	 373 132 3	1684**
Others: e.g.: Prison/ Maktab Rendah Sains MARA (MRSM) Pusat Serenti, Pusat Kanak-kanak Cacat and Children Spastic Centre.	14	14
TOTAL	**2169**	**4703**

Source: Health Informatics Centre Ministry of Health, 2012

**Including Dental Centre for Children & Malaysian Dental Training College, Penang*

***Total no. of portable dental unit under mobile dental team*

Oral Health Development

Professional Development
Oral Health Promotion
Epidemiology and Research
Dental Technology

ORAL HEALTH PROFESSIONAL DEVELOPMENT

The core activity of the Oral Health Professional Development Section is to develop human capital to produce an effective and efficient health delivery system. In short, it focuses in increasing opportunities for quality training to strengthen the human resource.

1. POST GRADUATE TRAINING FOR DENTAL PROFESSIONALS

1.1 Federal Scholarships for Dental Postgraduate Training

In 2012, 45 dental officers were offered Federal Scholarships to pursue dental postgraduate training. Another two dental officers were offered Study Leave with Full Salary but without Scholarship **(Table 13).** Although there has been an increasing number of dental officers applying for postgraduate training scholarships, the number of training slots offered has been about the same thoughout the years.

Table 13: Dental Officers Pursuing Postgraduate Training, 2001 – 2012

Year	Number of Dental Officers			Total
	Applied Scholarship	Offered Scholarship	Self-sponsored	
2001	95	28	0	28
2002	91	36	0	36
2003	39	21	0	21
2004	42	23	0	23
2005	39	17	4	21
2006	41	15	3	18
2007	88	29	2	31
2008	82	29	2	31
2009	82	29	11	40
2010	116	49	4	53
2011	150	35	4	39
2012	155	45	2	47

Source: Oral Health Division, MOH 2012

Postgraduate training is conducted both locally and abroad. Among those awarded scholarships, majority were in the discipline of Oral Surgery followed by Orthodontics. Two specialists pursued Areas of Special Interest in Paediatric Oral Surgery and Management and Rehabilitation of Oral Oncology **(Table 14).**

Table 14: Postgraduate Specialty Training, 2012

SPECIALTIES	WITH SCHOLARSHIP		WITHOUT SCHOLARSHIP		TOTAL
	Local	Abroad	Local	Abroad	
Oral Surgery	8	3	1	0	12
Orthodontics	0	9	0	1	10
Periodontics	3	3	0	0	6
Paediatric Dentistry	2	2	0	0	4
Restorative Dentistry	3	3	0	0	6
Oral Pathology & Oral Medicine	5	0	0	0	5
Special Needs Dentistry	0	1	0	0	1
Dental Public Health	1	0	0	0	1
Areas of Special Interest • Paediatric Oral Surgery • Management and Rehabilitation of Oral Oncology	1	1	0	0	1 1
Total	**23**	**22**	**1**	**1**	**47**

Source: Oral Health Division, MOH 2012

1.2 Dental Officers Completing Postgraduate Training in 2012

In 2012, a total of 22 dental officers completed their postgraduate training in various disciplines **(Table 15).**

Table 15: Dental Officers Completing Postgraduate Training, 2012

Dental Specialties	No. of Dental Officers Completing Dental Postgraduate Training		Total (Local and Abroad)
	Local	Abroad	
Oral & Maxillofacial Surgery	3	1	4
Orthodontics	1	1	2
Restorative Dentistry	2	1	3
Periodontics	2	2	4
Dental Public Health	4	0	4
Paediatric Dentistry	1	1	2
Special Needs Dentistry	0	1	1
Areas of Special Interest:			
• Management of Oral Oncology	0	1	1
• Full Mouth Rehabilitation	0	1	1
TOTAL	**13**	**9**	**22**

Source: Oral Health Division, MOH 2012

2. PROFESSIONAL DEVELOPMENT OF DENTAL AUXILIARIES

2.1 Post-basic Training for Dental Auxiliaries

In 2012, 24 dental nurses completed a 6-months post-basic course in Periodontics conducted at the Childrens' Dental Centre and Dental Training College Malaysia, Penang **(Table 16).**

Table 16: Post Basic Courses for Dental Auxiliaries, 1998-2012

Year	Dental Nurse		Dental Technologist	
	Specialty	**No.**	**Specialty**	**No.**
1998	Paediatric Dentistry	14	-	-
1999	Orthodontics	23	-	-
2000	-	-	Oral Maxillofacial Surgery	19
2001	-	-	Orthodontics	22
2002	Periodontics	17	-	-
2003	Paediatric Dentistry	8	-	-
2004	Oral Surgery	15	-	-
2005	Orthodontics	14	Orthodontics	18
2006	Paediatric Dentistry	13	-	-
2007	-	-	Oral Maxillofacial Surgery	18
2008	Orthodontics	20	-	-
2009	Periodontics	20	-	-
2010	Paediatric Dentistry	23	-	-
2011	-	-	Orthodontics	24
2012	Periodontics	24	-	-

Source: Oral Health Division, MOH 2012

2.2 Amendments to the Curriculum for Periodontics Post-Basic Course

NOHSA 2010 survey findings recommend that the community-based Post-Basic Periodontics be incorporated into the Post Basic training for dental nurses. Further discussion is required to address the curriculum component for scaling and polishing in children and adults in 2013.

2.3 Amendments to the Dental Surgery Assistant Scheme

A proposal to upgrade the Dental Surgery Assistant (DSA) scheme from certificate to diploma was submitted to the Human Resource Division on 22 October 2012 with the following amendments:

- Topping up curriculum for the certificate holder
- Admission qualification for the Dental Surgery Assistant course from *Penilaian Menengah Rendah* to *Sijil Pelajaran Malaysia*

2.4 Review of the *'Skim Perkhidmatan Bersepadu'* for Dental Nurses and Dental Technologist in the Ministry of Health

The proposal for *Skim Perkhidmatan Bersepadu* for Dental Nurses and Dental Technologists was put on hold until the issue on Degree Programmes is settled.

3. IN-SERVICE TRAINING (*LATIHAN DALAM PERKHIDMATAN*)

A total of RM 3 million was received in 2012, of which RM 2.9 million was spent on training locally and abroad **(Table 17).**

Table 17: Funds for In-Service Training under 10th Malaysia Plans

Year	In-Service Training	Allocation (RM)	Dental Professionals and Auxiliaries Trained	Expenses (RM)	% Expenditure
10th Malaysia Plan (2011-2015)					
2011	Local	2,015,000	14,929	2,014,731	99.9
	Overseas	985,000	23	960,000	97.5
	Total	**3,000,000**	**14,954**	**2,974,731**	
2012	Local	2,660,000	17,294	2,571,992	96.7
	Overseas	340,000	10	340,000	100
	Total	**3,000,000**	**17,304**	**2,931,992**	

Source: Oral Health Division, MOH 2012

3.1 Local In-Service Training *(Latihan Dalam Perkhidmatan – Dalam Negara)*

A total of 481 courses/seminars were conducted and attended by 17,294 dental professionals and auxiliaries in 2012. Of these, 14 courses were for specialists and dental officers conducted by the various specialities **(Table 18)**.

Table 18: Consultancy Training for Specialties Conducted Locally, 2012

Specialty	Training Topic	Consultant & Participants	Date	Expenses	Venue
Dental Public Health Specialist	Blue Ocean Strategy Workshop	50 Dental Public Health and Dental Officers	26-28 Nov 2012	RM49,900	Hotel Holiday Villa, Subang
	6th Asia Pacific Organization for Cancer Prevention	14 Dental Public Health and Dental Officers	26-29 April 2012	RM27,000	Hotel Pullman, Kuching
Oral Surgery	Dental Management of Hematological Patients	100 Oral Maxillofacial Specialists and Dental Officers	20-22 June 2012	RM31, 380	Hotel Vistana, KL
	Management of Medical Emergencies & Medically Compromised Patients	61 Oral Maxillofacial Specialists and Dental Officers (Pen Malaysia)	17-19 July 2012	RM30,640	Royale Bintang, Seremban
	Management of Medical Emergencies & Medically Compromised Patients	38 Oral Maxillofacial Specialists and Dental Officers (Sabah)	15-17 Oct 2012	RM13,380	Hotel Grand Borneo, Kota Kinabalu
	Management of Medical Emergencies & Medically Compromised Patients	29 Oral Maxillofacial Specialists and Dental Officers (Sarawak)	6-8 Nov. 2012	RM12,144	Grand Continental, Kuching
Orthodontics	MAO Scientific Orthodontic Conference	81 Orthodontic Specialists	14-16 April 2012	RM60,750	Sutera Harbour Resort, Kota Kinabalu
	Scientific Orthodontic Hands on Workshop	26 Orthodontic Specialists	17 April 2012	RM9,100	
Paedia-trics	*Kursus Paediatric* Advanced Life Support	29 Paediatric Dentistry and Dental Officers	1-3 July 2012	RM45,000	Hotel Concorde, Shah Alam
Periodon-tics	5th Malaysian Society of Periodontics Biennial Scientific Conference	21 Periodontics Specialists	19-20 October 2012	RM22,500	UiTM Shah Alam
	Clinical Photography – Practical Ways of Producing Good Presentation	33 Periodontics Specialist and Dental Officers	Mar 2012	RM15,000	Angkasa Express Puduraya
Special Needs Dentistry	Seminar on Special Needs Dentistry – Geriatric patients and clinical challenges	2 Special Needs Dentistry Specialists 40 Dental Officers	6-8 Jun 2012	RM25,000	Hotel Royale Bintang, Seremban
Resto-rative Dentistry	Updates in Endodontic	30 Restorative Dentistry Specialists and Dental Officers	27-29 Mar 2012	RM12,236	Hotel Residence, Bangi
	Maxillofacial Defect Prosthesis Part 1	**Consultant** Assoc. Prof Edmond Pow Ho Nang (University Sai Ying Pun Hong Kong) **Participants** 19 Restorative Dentistry Specialists	21-23 Nov. 2012	RM20,055	Hotel Grand Season, KL

Source: Oral Health Division, MOH 2012

3.2 In-service Training Abroad *(Latihan Dalam Perkhidmatan - Luar Negara)*

A total of RM 340,000.00 was spent for training abroad for 10 personnel **(Table 19).**

Table 19: Training Abroad under *LDP - Luar Negara*, 2012

	Course	Venue	Date
1.	**Dental Implant Distracter** (Dr Tay Keng Kiong, En Peter Moni Selat, Pn Fauziah Abdullah)	Jiao Tong University, Shanghai	15-29 Aug 2012
2.	**Clinical Hypnosis and Sedation** (Dr Yogeswari Sivapragasam, Dr Rashima Ali, Pn Kway Lay Hong)	Eastman Dental Institute, United Kingdom	16 November 2012
3.	**Dental Traumatology Dentistry** (Dr Kalaiarasu a/l Peariasamy)	University of Gothenburg, Sweden	16-31 October 2012
4.	**8th Biennial Conference of Paediatric Dentistry Association of Asia** (Dr Baharuddin, Dr Sarimah, Dr Jama'iah)	Bali, Indonesia	24-26 May 2012

Source: Oral Health Division, MOH 2012

3.3 Continuing Professional Development (CPD)

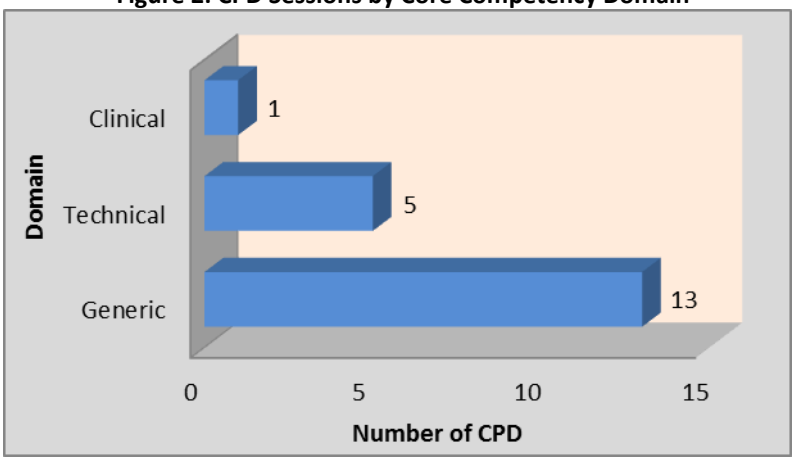
Nineteen CPD sessions were held at the Oral Health Division in 2012 (**Table 20**).

Table 20: CPD Sessions at the Oral Health Division, MOH, 2012

No	CPD Course	No	CPD Course
1	*Keselamatan & Kesihatan Pekerjaan (Siri 1:Pengenalan)*	11	*Taklimat Penggunaan Perisian Open Office*
2	*Amalan 5S*	12	*Keselamatan ICT*
3	*Taklimat HMRIS dan Fail Meja*	13	*Tatacara Perolehan Perkhidmatan Kemudahan Latihan Secara Pakej*
4	*Keselamatan Kebakaran*	14	*Membeli Syurga dengan Harta*
5	*Perbincangan Buku Log Pakar Pergigian Kesihatan Awam*	15	*Taklimat Klasifikasi Fail*
6	*Taklimat CUEPACS*	16	*Taklimat ISO untuk Anggota BKP*
7	Economic Analysis in Preventive Dental Programmers	17	*Taklimat dan Sesi CPD Cawangan Pengurusan dan Perkembangan Fasiliti*
8	The Control of Snoring and Abstructive Sleep Apneo Using Intra Oral Appliance	18	*Pembentangan Projek Khas oleh Pelajar Siswazah Kesihatan Awam USM*
9	Method of Producing a Dental Prosthesis	19	PowerPoint 'Enhancing Your Basic Presentation'
10	*Penggunaan MOH*Cube dan Fungsi-fungsi*		

The CPD session comprised of three core competencies namely Clinical, Technical and Generic competencies **(Figure 2).**

Figure 2: CPD Sessions by Core Competency Domain



Source: Oral Health Division, MOH 2012

3.4 MyCPD Programme for Dental Technologists and Dental Nurses

Dental Technologists and Dental Nurses in the MOH were advised to register on MyCPD online, in preparation for CPD implementation starting 2013 under the *Pekeliling Ketua Pengarah Kesihatan Malaysia Bil (11) dlm KKM/87/SKB01/600-1/2/2 Jld.3.*

3.5 Verification Audit on Continuing Professional Development (CPD)

CPD verification audits are done every 6 months on a random sample of log books from 20% of the officers. On average 63.4% of sample have made the correct claimed of CPD points. Audit reports were submitted to the Medical Development Division of the MOH in 2012.

ORAL HEALTH PROMOTION

1. INTRA-AGENCY COLLABORATION

1.1 Media Talks (Radio/TV) in collaboration with Health Education Division (HED), MOH

In 2012, seven oral health topics were identified for radio/TV talks but only three slots were given **(Table 21).**

Table 21: Media Talks on Oral Health, 2012

Media	Topic	Speaker
Traxx FM	Oral Ulcers	Dr. Norlian Daud
Traxx FM	Illegal Dentistry	Dr. Elise Monerasinghe
RTM1 – *Selamat Pagi Malaysia*	*Kehilangan Gigi: Dentur atau Implan*	Dr. Noraini Nun Nahar

Source: Oral Health Division, MOH 2012

A total of thirteen TV episodes for *`Mutiara Putih'* was offered by RTM through a private broadcasting company, Summit Treasure Sdn. Bhd. The filming of 'Mutiara Putih' was completed in November 2012 and is in the process of editing for viewing in 2013. The Oral Health Promotion section was involved in topics selection, editing scripts, coordinating involvement of specialists and dental officers, as well as organising the preview session.

1.2 MyHealth Portal in collaboration with Health Online Unit HED, MOH

- **Identification of oral health topics, writers, accreditors, and editorial reviews**

Twelve new articles were written while nine were re-written and five unfinished topics from 2011 were completed for the MyHealth Portal in 2012 and 33 other topics were reviewed by editors **(Table 22).**

Table 22: Oral Health Topics for MyHealth Portal, 2012

Topics in English	Topics in Bahasa Malaysia
New articles written and completed in 2012	
1. Effects of drug abuse on oral health 2. Radiotherapy and oral health 3. Dental radiography 4. Smoking and gum disease 5. How to maintain your crown and bridges 6. Preventing dental caries with topical fluoride treatment 7. Complications of tooth extraction	*1. Pengamalan pergigian haram : risiko rawatan tukang gigi jalanan* *2. Merokok dan penyakit gusi* *3. Penjagaan korona dan jambatan* *4. Kesan-kesan rawatan ortodontik* 5. *Komplikasi cabutan gigi*
Articles from 2006-2010: Re-written in 2012	
1. Pregnancy and oral health 2. What you need to know about oral piercing 3. Keep the dentist informed about your medical problems 4. Start early, healthy teeth for a healthier life 5. Tooth discolouration 6. Dentures	*1. Mulakan awal – Mulut sihat hidup lebih sihat* *2. Gigi bertukar warna* 3. *Gigi palsu*
Topics carried forward from 2011: Completed in 2012	
1. Ageing and gum changes 2. Gum problems amongst medically compromised patient - awaiting editorial review 3. Saving a child's tooth 4. Dental and soft tissue anomalies in children - awaiting feedback from accreditor 5. Oral lumps and bumps - awaiting feedback from accreditor	Not available
Editorial Reviews 2012	
Topics in English	**Topics in Bahasa Malaysia**
1. "Pay extra attention to home care if you are wearing braces" 2. Effects of drug abuse on oral health 3. Radiotherapy and oral health 4. Dental radiography 5. Smoking and gum disease 6. How to maintain your crown and bridges 7. Preventing dental caries with topical fluoride treatment 8. Complications of tooth extraction 9. Pregnancy and oral health 10. What you need to know about oral piercing 11. Keep the dentist informed about your medical problems 12. Start early, healthy teeth for a healthier life 13. Tooth discolouration 14. Dentures 15. Ageing and gum changes 16. Gum problems amongst medically compromised patient	*1. Risiko rawatan pergigian untuk pesakit jantung* *2. Penuaan dan perubahan gusi* *3. Diabetes dan kesihatan oral* *4. Kaitan antara kesihatan mulut dan badan* *5. Kehausan gigi* *6. Penjagaan kesihatan pergigian kanak-kanak yang mempunyai masalah pendarahan* *7. Pengurusan pembetulan maloklusi: ortodontik interseptif / pintasan* *8. Ortodontik bagi orang dewasa* *9. Pembedahan rahang kosmetik* *10. Kudis dan bisul mulut* *11. Pengamalan pergigian haram : risiko rawatan tukang gigi jalanan* *12. Merokok dan penyakit gusi* *13. Penjagaan korona dan jambatan* *14. Kesan-kesan rawatan ortodontik* *15. Komplikasi cabutan gigi* *16. Mulakan awal – mulut sihat hidup lebih sihat* 17. *Gigi palsu*

- **'Ask the Expert' segment**

This section is responsible for answering queries regarding oral health in the MyHealth Portal. In 2012, a total of 52 queries from the public were received and answered within 3 working days **(Table 23).**

Table 23: Number of Queries Received by various disciplines

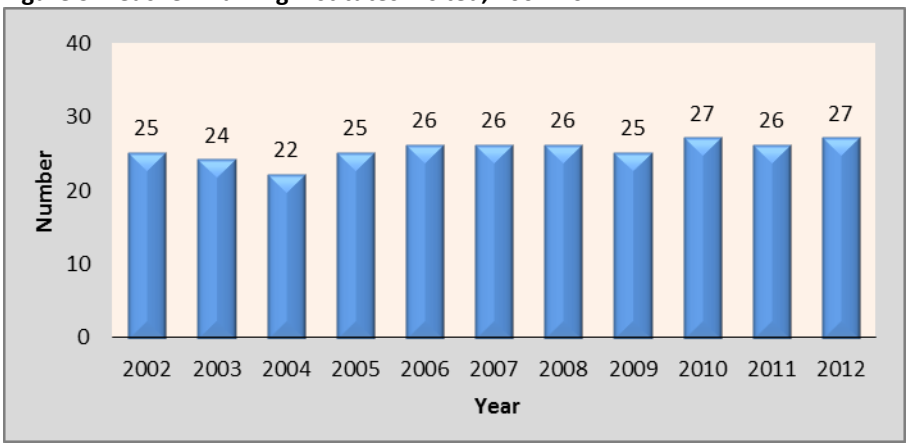
No	Discipline	Number of queries
1.	Oral Surgery	11
2.	Paediatric Dentistry	5
3.	Orthodontics	12
4.	Periodontics	3
5.	Restorative	5
6.	Oral Medicine & Oral Pathology	2
7.	Special Needs dentistry	1
8.	General	13
	Total	**52**

2. INTER-AGENCY COLLABORATION

2.1 Oral Health Programme for Trainee Teachers

A total of 2,873 trainee teachers from 27 Teacher Training Institutes, Ministry of Higher Education participated in this programme **(Figure 3).** Oral health packs were distributed to 15 Teacher Training Institutes in 2012.

Figure 3: Teacher Training Institutes Visited, 2002-2012

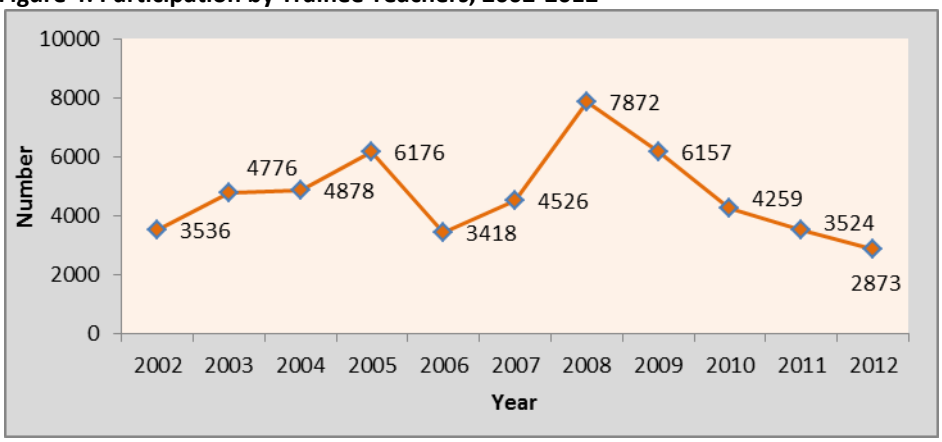


Source: Oral Health Division, MOH 2012

A workshop was held from 26 – 28 June 2012 in Kuala Lumpur for 54 co-ordinators from the Teacher Training Institutes and MOH. The aim was to strengthen the Oral Health Programme for Trainee Teachers. The document *'Garis Panduan Programme Kesihatan Pergigian untuk Guru Pelatih 2005'* was reviewed. Some 500 copies were printed and distributed to Dental Public Health Specialists and coordinators at district and state level.

There has been a gradual decline in trainee teachers participating in the Oral Health Programme from 2008 to 2012 (**Figure 4)**. This is due to the reduction of intake for candidates in the Diploma Programme (*Kursus Perguruan Lepasan Ijazah/KPLI*). A 4-year degree programme (*Programme Ijazah Sarjana Muda Perguruan/PISMP*) has been introduced where the oral health module will be taught only once during the 4 years.

Figure 4: Participation by Trainee Teachers, 2002-2012



Source: Oral Health Division, MOH 2012

2.2 Participation in other Health Promotion Activities

The Oral Health Promotion Section participated in exhibitions at nine events throughout the year **(Table 24).**

Table 24: Oral Health Exhibitions, 2012

No	Date	Location	Event
1.	13 – 15 January 2012	Sunway Pyramid	MDA/FDI International Scientific Convention and Trade Exhibition
2.	20 - 21 March 2012	Multimedia University, Cyberjaya	Help & Health Campaign
3.	23 April 2012	Shah Alam Convention Centre	*Hari Anugerah Kantin dan Dewan Makan SM Bersih*
4.	24 May 2012	Kuala Lipis, Pahang	Launching of 1Malaysia Mobile Dental Clinic
5.	7 July and 9 September 2012	Presint 9 and 3, Putrajaya	*Karnival Sihat 1Malaysia*
6.	22 – 23 September 2012	Putra World Trade Centre, Kuala Lumpur	*Karnival Pendidikan Sepanjang Hayat*
7.	5 – 7 October 2012	Putra World Trade Centre, Kuala Lumpur	*Expo Pembangunan Manusia*
8.	18 November 2012	Taman Tasik Shah Alam	Oral Cancer Awareness Week
9.	18 November 2012	Zon 6B, Jalan P11J, Presint 11, Putrajaya	*Majlis Ramah Mesra Persatuan Penduduk Zon*

Source: Oral Health Division, MOH 2012

2.3 Visitors to the Oral Health Division

The OHD also received visitors in 2012 (**Table 25).**

Table 25: Visitors to the Oral Health Division, 2012

No	Visitors	Date	No. of visitors
1.	Dental students from International Medical University (IMU)	6 April 2012	30
2.	Dental students from *Universiti Kebangsaan Malaysia (UKM)*	21 September 2012 and 5 October 2012	57

Source: Oral Health Division, MOH 2012

3. ORAL HEALTH INFORMATION DEVELOPMENT AND DISSEMINATION

3.1 Oral Health Education Materials

- **Pop-up**
  A new pop-up display exhibition panel on "Periodontal Disease" was developed in 2012 while two pop-up display exhibition panels '*Penyakit Gusi and Kurangkan Pengambilan Gula'* were reprinted.

- **Roll –up Banners**

  Five new roll-up banners sized 32" x 78" were designed and printed in 2012. These were:

  1. *Jagalah Kesihatan Gigi Anak untuk Kekal Sihat dan Ceria (1 unit)*
  2. *Kesihatan Pergigian untuk Ibu Mengandung (1 unit)*
  3. *Kurangkan Pengambilan Gula, Mulut Sihat, Hidup Lebih Sihat (1 unit)*
  4. *Hargailah Gigi Anda, Gigi Sihat, Senyuman Memikat (1 unit)*
  5. *Bahagian Kesihatan Pergigian, KKM* (2 units)

  In addition, four roll-up banners sized 60"x 84" were re-printed.

  1. *Kesihatan Periodontium (2 units)*
  2. *Kanser Mulut – Amalan dan bahan yang boleh meningkatkan kanser mulut (2 units)*

- **Posters**

  Five new posters sized 20" x 30" were printed and distributed to the states. These were:

  1. *Pemeriksaan Gigi Berkala*
  2. *Tips Penjagaan Kesihatan Pergigian*
  3. *Memberus Gigi*
  4. *Masalah Gigi Tidak Teratur*
  5. *Penyakit Gusi*

- **Pamphlets**

  A new pamphlet on preventive dental check-up "*Dapatkan Pemeriksaan Pergigian Secara Berkala"* was developed and printed. A pamphlet from the Restorative Unit in FTKL "*Kenali Korona dan Jambatan Pergigian"* was further improved, enhanced and printed in November 2012. The existing pamphlets on Oral Cancer in *Bahasa Melayu* and English version were reviewed and printed in April 2012.

- **Flip Chart**

  A flip chart sized A3 "*Tidak Terlalu Awal Memulakan Penjagaan Kesihatan Pergigian"* was reviewed and distributed to the states. The layout plan and content development for another Flip Chart on Oral Cancer was prepared in October 2012.

- **Others**

  A total of 4000 copies of the "*Buku Panduan Kesihatan Pergigian" and* 3,000 copies of the National Oral Health Plan (2011-2020) were printed and distributed to the states.

4. TRAINING

4.1 Developing Effective Promotion Materials

The seminar on 'Developing Effective Oral Health Promotion Materials' involving state participants was held from 9 - 11 July 2012 at the Avillion Cove, Port Dickson. Another in-house training session on graphic software for participants from WPKL/Putrajaya, Selangor, Negeri Sembilan, and Pahang was conducted on 20 September 2012 at the Oral Health Division, MOH.

5. MONITORING AND EVALUATION

5.1 Oral Health Promotion activities

In 2012, a total of 707,904 oral health promotion activities were carried out by dental officers and dental nurses in all states. Overall, there was an increase in number of oral health promotion activities conducted from 2009 to 2012 (**Table 26**).

Table 26: Oral Health Promotion Activities, 2009 – 2012

Type of Activity	No. of Actitities			
	2009	2010	2011	2012
Tooth brushing Drill (TBD)	206,221	237,910	225,652	234,038
Dental health talk	238,548	282,135	305,740	342,137
In-service training	497	473	538	433
Role play	33,769	36,023	39,842	42,276
Puppet show	3,036	3,507	2,968	3,278
Exhibition /Campaign	2,754	3,370	3,823	4,278
TV/Radio (Mass Media)	44	53	40	46
Community Service	1,789	658	869	1,140
Others	30,448	50,587	65,355	80,278
Total	**517,106**	**614,716**	**644,827**	**707,904**

Source: Health Informatics Centre, MOH 2012

There was an increase in the number of preschool children participating in tooth brushing drills (TBD) from 2009 to 2012 (**Table 27**).

Table 27: Participants at Tooth Brushing Drills, 2009-2012

Year	Pre-school Children			Primary Schoolchildren		
	No. of participants	Est. Pop	%	No. of participants	Est. Pop	%
2009	566,685	947,348	59.8	2,718,518	2,955,173	92.0
2010	579,179	804,140	72.0	2,738,118	2,889,150	94.8
2011	594,986	1,024,900	58.1	2,716,242	2,864,264	94.8
2012	607,995	1,312,090	46.3	2,686,003	3,951,066	68.0

Source: Health Informatics Centre, MOH 2012

There was an increase in the number receiving oral health talks for all target groups (**Table 28**).

Table 28: Participants at Dental Health Talks, 2009-2012

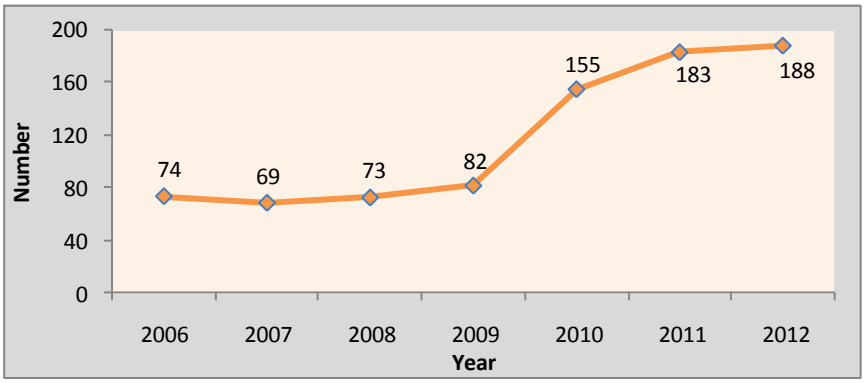
Target Group	Number Of Participants (% Population Reached)							
	2009	%	2010	%	2011	%	2012	%
Pre-school	566,321	59.8	578,269	71.9	592,865	57.8	601,880	57.4
Primary	2,742,977	92.8	2,773,074	95.9	2,736,709	95.5	2,697,395	92.6
Secondary	780,555	34.5	832,886	37.1	895,602	39.6	906,502	39.7
Antenatal	122,663	22.6	153,762	26.2	162,232	29.5	183,409	30.1
Adults	117,694	0.60	126,197	0.70	129,948	0.7	159,503	0.8
Total	**4,330,210**	**16.3**	**4,464,188**	**18.2**	**4,517,356**	**17.2**	**4,548,689**	**17.9**

Source: Health Informatics Centre, MOH 2012

5.2 Oral Health Seminars for Pre-school Teachers

Seminars for preschool teachers were organized at state and district levels to increase oral health awareness. These collaborative efforts aim to improve the oral health of pre-schoolchildren and schoolchildren. In 2012, 188 oral health seminars were organized by the states (**Figure 5**).

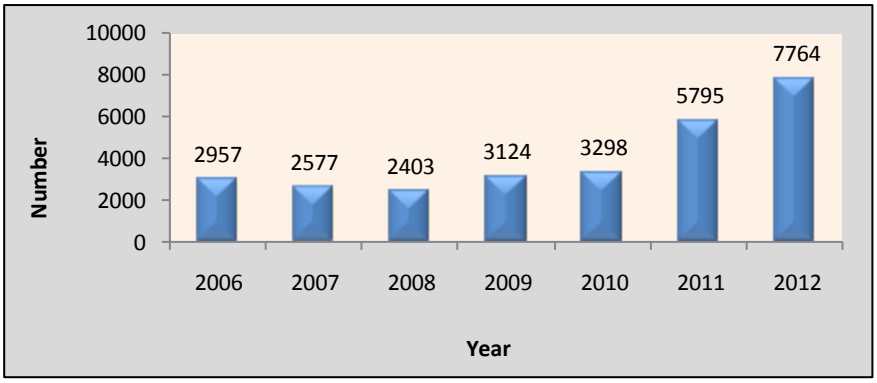
Figure 5: Number of Oral Health Seminars for Teachers, 2006-2012



Source: Oral Health Division, MOH 2012

A total of 7,764 teachers were involved in the oral health seminars (**Figure 6**).

Figure 6: Number of Teachers Trained at Oral Health Seminars, 2006-2012



Source: Oral Health Division, MOH 2012

These included 2,751 pre-school teachers from 2,271 government kindergartens, 906 teachers from 860 private kindergartens and 2,073 childcare centres (TASKA) teachers from 794 TASKA (**Table 29**).

Table 29: Performance by State, 2012

State	No. of Seminars	No. of teachers		No. of Preschools		Teachers at Childcare Centres	No. of Childcare Centres	Health Personnel
		Govt	Private	Govt	Private			
Perlis	5	77	20	77	20	58	58	40
Kedah	15	641	168	400	74	362	163	80
Penang	5	98	64	81	55	16	8	24
Perak	12	333	85	357	206	148	80	223
Selangor	38	302	369	217	357	548	218	151
WPKL	4	28	5	28	5	18	18	25
N.Sembilan	9	198	33	164	29	147	85	75
Melaka	4	55	2	52	1	26	4	0
Johor	22	216	41	208	36	52	29	207
Pahang	5	61	15	53	13	52	18	18
Terengganu	17	0	0	0	0	160	10	668
Kelantan	21	269	16	264	16	38	37	290
Sabah	8	160	51	53	13	35	31	208
Sarawak	20	313	26	218	6	381	35	2
Labuan	3	0	11	0	5	32	0	23
TOTAL	**188**	**2751**	**906**	**2271**	**800**	**2073**	**794**	**2034**

Source: Oral Health Division, MOH 2012

In terms of coverage, 97.3% of the government and private pre-schools benefited from the oral health seminars conducted in 2012 (**Table 30**). This augurs well for the early childhood and pre-school oral healthcare programmes.

Table 30: Coverage of Preschools for Oral Health Seminars, 2005 - 2012

Year	No. of govt preschools covered	Total no. of govt preschools	% coverage of govt	No. of private preschools covered	Total no. of private preschools	% coverage of private	Total no. of preschools covered	% of total preschools covered
2005	1,093	11,681	9.4%	165	3,633	4.5%	1,258	8.2%
2006	1,979	12,232	16.2%	310	3,872	8.0%	2,289	14.2%
2007	1,698	13,133	12.9%	405	3,854	10.5%	2,103	12.4%
2008	1,643	13,694	11.9%	432	3,754	11.5%	2,075	11.9%
2009	1,990	14,258	14.0%	230	3,950	5.8%	2,220	12.2%
2010	2,143	14,296	15.0%	302	3,864	7.8%	2,445	13.5%
2011	2,469	14,927	16.5%	372	4,050	9.2%	2,841	14.9%
2012	15,311	15,717	97.4%	3,990	4,123	96.7%	19,840	97.3%

Source: Oral Health Division, MOH 2012

6. TOBACCO CESSATION ACTIVITIES

Tobacco cessation messages continued to be emphasised in the oral health education and counselling sessions for outpatients and schoolchildren. A total of 82 training sessions involving 1,654 participants were conducted in 2012. Efforts were emphasized at encouraging staffs and patients to quit smoking. A total of 453 smokers were referred to quit smoking clinics **(Table 31).**

Table 31: Tobacco Cessation Activities, 2006-2012

Activities	Training / briefings / courses	Participants	Patients refered to Quit Smoking Clinics
2006	25	769	567
2007	26	513	261
2008	43	1,180	798
2009	64	1,318	201
2010	67	1,707	463
2011	91	1,854	486
2012	82	1,654	453

Source: Oral Health Division, MOH 2012

ORAL HEALTH EPIDEMIOLOGY AND RESEARCH

The uncompleted projects in year 2011 were continued in 2012 and several new research projects were started at Ministry and Programme levels.

1. NATIONAL LEVEL RESEARCH PROJECTS AND INITIATIVES

1.1 National Health and Morbidity Survey (NHMS) 2011-2014

NHMS 2011-2014, the country's fourth National Health and Morbidity Study is led by the Public Health Institute (IPH), MOH. The survey will be the platform to obtain community-based data for healthcare policy decisions.

In 2012, the preparation of the final report for the following oral healthcare components was initiated:

- Health Care Demand Module with the Institute of Health Systems Research
- Global School Health Survey Malaysia with the Institute for Behavioural Health Research.

The data analysis and statistical report for the oral health component of Healthcare Demand Module which included load of illness, health seeking behaviour and utilization of oral healthcare was completed. The findings were presented at the 15th NIH Scientific Meeting in June 2012 and at the *Mesyuarat Teknikal Bahagian Kesihatan Pergigian, KKM Bil. 10/2012.*

Data from the oral health component of the Healthcare Demand Analysis (HCD) contributed input to the Institute for Health System Research (IHSR) to support the healthcare transformation plan in Malaysia. The study entitled "HCD – Model and Policy Simulation for 1Care" was conducted in collaboration with a consultant from the Institute for Health Policy, Sri Lanka.

The Global School Health Survey (GSHS) focuses on the behavioural aspects in relation to health and oral health of schoolchildren aged 13-17 year old. It is part of the country surveys coordinated by the World Health Organisation (WHO). The data analysis of the Hygiene Module in the GSHS was completed in 2012 by the IPH MOH Malaysia. The output was checked and verified by the Oral Health Division. The first draft of the write-up was submitted to the IPH MOH for the preparation of the country report.

1.2 National Burden of Disease (BOD) Study

This is the 2nd Burden of Disease study under the IPH MOH. The objective of the study is to quantify the burden of disease and injuries in terms of Disability Adjusted Life Years (DALYs) which combines mortality and morbidity dimensions. Data from three national oral health surveys: National Oral Health Survey of Preschool Children 2005 (NOHPS 2005), National Oral Health Survey of Schoolchildren 2007 (NOHSS 2007) and National Oral Health Survey of Adults Year 2010 (NOHSA 2010) were utilised for the study. In 2012, data mining was completed as scheduled and the results of analysis was submitted to the IHSR, MOH for the preparation of the final report.

1.3 Analysis of Provider Payment and Expenditures in Health

This study was initiated in 2011 by the IHSR. The objective of the study is to analyse 'private healthcare providers' financial arrangements. This includes the private dental providers. In 2012, the preliminary report was completed and submitted to IHSR, MOH for preparation of the final report. The findings were presented at the 15th NIH Scientific Meeting in June 2012. Research highlight was undertaken by the IHSR as a combined highlight of financial arrangements and expenditures in health in Malaysia.

1.4 Collaborative Project "An Evaluation of Diabetic Patients to the Dental Clinic"

"An Evaluation of Diabetic Patients to the Dental Clinic" was a research study initiated by the Oral Health Division in 2010 in collaboration with the IPH, IHSR, the Disease Control Division and the Family Health Development Division in the MOH. Phase I data collection was conducted in Kedah and Negeri Sembilan and the control states Johor and Terengganu and was completed in 2012. Phase II of the study started in November 2012 and will continue into 2013.

1.5 National Oral Health Research Initiative (NOHRI)

The NOHRI is a platform to bring together relevant private and public agencies with oral health research on the agenda. Since its inception in 2011, oral health research priorities for the 10th Malaysia Plan (2011-2015) have been identified and uploaded in the Oral Health Division, MOH webpage. NOHRI aims to bring about more collaborative multidisciplinary research for oral health and to exert leverage for research grants in the future.

2. PROGRAMME LEVEL RESEARCH PROJECTS

2.1 National Oral Health Survey of Adults (NOHSA 2010)

In peparation for NOHSA 2010, the country's fourth national adult oral health survey was begun in the last quarter of 2008. In 2012, the unweighted data report was printed and the highlights of the survey findings were compiled as NOHSA 2010 fact sheet. The final report is expected to be completed by 2013.

2.2 National Oral Health Survey of Preschool Children (NOHPS 2005)

Further analysis of the NOHPS 2005 concerning knowledge, perception and behaviour of kindergarten teachers/assistants was conducted by a postgraduate student under the supervision of two dental public health officers at the Oral Health Division (October – December 2012). The findings were presented on 10 December 2012 at the Oral Health Division.

2.3 Costing Dental Procedures in Sabah Dental Facilities

A cost study on three dental procedures was conducted in one rural and one urban dental clinic in Sabah. Data cleaning for the micro-costs data for three dental procedures includes: Dental examination and diagnosis, Scaling and Prophylaxis and Dental Extraction, was carried out in September 2012. Further analysis and the initial report of the combined macro-costs and micro-cost of each procedure will continue into 2013.

2.4 Costing Dental Procedures in Selangor Dental Facilities

Preliminary reports of the combined macro-costs and micro-cost of five dental procedures namely Examination and Diagnosis, Scaling and Prophylaxis, Fissure Sealants, Denture Laboratory procedures and Denture Clinical procedures were completed in December 2012. Findings for the costing of denture laboratory procedures in public sector dental clinics in Selangor were presented as poster at the 15th NIH Scientific Meeting in June 2012.

2.5 Study on "High Incidence of Caries in Kelantan"

This is a nested study of NOHSA 2010 in Kelantan to assess the pattern of sugar consumption and its association with caries severity. The initial data analysis was completed and the findings were presented at the NOHSA 2010 Seminar on the 7-10 November 2012 at Hotel Holiday Villa, Subang Jaya.

2.6 Study on "Dental Practitioners" *Perception on the Utilization of Dental Therapists in the Private Dental Practice in Malaysia"*

The above study was initiated in 2009 and covered all registered and practising Malaysian dental practitioners. Data collection was completed in October 2010. The findings of the study were presented at the *Mesyuarat Teknikal Bil. 6/2011* in June 2011. The manuscript for publication was submitted to the Malaysian Dental Journal in November 2012. published...

3. HEALTH SYSTEMS RESEARCH (HSR) FOR ORAL HEALTH

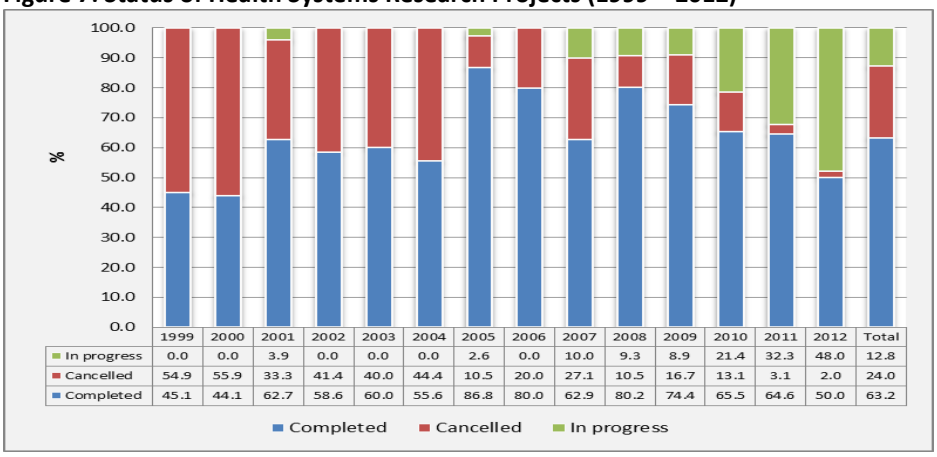
In its efforts towards inculcating a research culture in the organization, the following activities took place in year 2012 in the area of health systems research.

3.1 Monitoring Health Systems Research (HSR) Projects

Monitoring of HSR projects conducted at state level began in 1999 and continued through the years. The status of projects for 1999 – 2012 is as shown in **Table 32** and **Figure 7.**

A total of 876 HSR projects were identified by the states and institutions from 1999 – 2012. Of these, 554 (63.2%) had been successfully completed, 112 (12.8%) projects are on-going and 210 (24.0%) projects were cancelled.

Figure 7: Status of Health Systems Research Projects (1999 – 2012)



	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	Total
In progress	0.0	0.0	3.9	0.0	0.0	0.0	2.6	0.0	10.0	9.3	8.9	21.4	32.3	48.0	12.8
Cancelled	54.9	55.9	33.3	41.4	40.0	44.4	10.5	20.0	27.1	10.5	16.7	13.1	3.1	2.0	24.0
Completed	45.1	44.1	62.7	58.6	60.0	55.6	86.8	80.0	62.9	80.2	74.4	65.5	64.6	50.0	63.2

Source: Oral Health Division, MOH 2012

Table 32: Status of Health Systems Research Projects by Year from 1999–2012

Status	Year														
	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	Total
	n	n	n	n	n	n	n	n	n	n	n	n	n	n	N
	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
Proposed (N)	71	59	51	58	25	36	38	45	70	86	90	84	65	98	876
Completed (A)	32	26	32	34	15	20	33	36	44	69	67	55	42	49	554
(%=n/N)	45.1	44.1	62.7	58.6	60.0	55.6	86.8	80.0	62.9	80.2	74.4	65.5	64.6	50.0	63.2
Cancelled	39	33	17	24	10	16	4	9	19	9	15	11	2	2	210
(%=n/N)	54.9	55.9	33.3	41.4	40.0	44.4	10.5	20.0	27.1	10.5	16.7	13.1	3.1	2.0	24.0
In Progress	0	0	2	0	0	0	1	0	7	8	8	18	21	47	112
(%=n/N)	0.0	0.0	3.9	0.0	0.0	0.0	2.6	0.0	10.0	9.3	8.9	21.4	32.3	48.0	12.8
Presented	19	13	17	20	14	17	17	25	34	48	48	34	31	37	374
(%=n/A)	59.4	50.0	53.1	58.8	93.3	85.0	51.5	69.4	77.3	69.6	71.6	61.8	73.8	75.5	67.5
Publication	24	19	23	16	8	15	17	26	21	41	39	23	13	9	294
(%=n/A)	75.0	73.1	71.9	47.1	53.3	75.0	51.5	72.2	47.7	59.4	58.2	41.8	31.0	18.4	53.1

Source: Oral Health Division, MOH 2012

State research teams have made good efforts to publish their work and presented the findings at accredited meetings or conferences held locally and abroad. Of the 554 completed projects, more than two thirds (374; 67.5%) had been presented and more than half (294; 53.1%) had been published. The trend shows that the majority of the states/institutions (14; 77.7%) had successfully completed at least 50% of their proposed research projects **(Table 33)**.

Table 33: Status of HSR Projects by States/Institutions, 2012

State/Institution	Proposed	Completed		Presented		Publication		Cancelled	
	N	N	(%)	N	(%)	N	(%)	N	(%)
Perlis	18	10	55.6	7	70.0	4	40.0	3	16.7
Kedah	90	69	76.7	24	34.8	34	49.3	9	10.0
P. Pinang	39	25	64.1	17	68.0	20	80.0	10	25.6
KLPM	20	11	55.0	3	27.3	6	54.5	7	35.0
Perak	60	37	61.7	31	83.8	30	81.1	19	31.7
Selangor	54	16	29.6	5	31.3	2	12.5	28	51.9
WPKL	34	18	52.9	10	55.6	0	0.0	8	23.5
HKL/ Paediatric	27	24	88.9	23	95.8	9	37.5	1	3.7
HKL/ Oral Surgery	21	19	90.5	9	47.4	14	73.7	0	0.0
N. Sembilan	41	24	58.5	22	91.7	23	95.8	12	29.3
Melaka	64	26	40.6	20	76.9	12	46.2	19	29.7
Johor	102	86	84.3	80	93.0	46	53.5	10	9.9
Pahang	76	36	47.4	25	69.4	23	63.9	31	40.8
Terengganu	53	40	75.5	36	90.0	37	92.5	11	20.8
Kelantan	57	33	57.9	19	57.6	19	57.6	15	26.3
Sarawak	60	37	61.7	16	43.2	3	8.1	12	20.0
Sabah	60	43	71.7	27	62.8	12	27.9	15	25.0
WP Labuan	0	0	0.0	0	0.0	0	0.0	0	0.0
Total	**876**	**554**	**63.2**	**374**	**67.5**	**294**	**53.1**	**210**	**24.0**

Source: Oral Health Division, MOH 2012

3.2 Publication of Compendium of Abstracts 2011

The Compendium of Abstracts 2011 was published in 2012. Out of the 92 abstracts, 53 have been presented at scientific meetings, six were publication in local or international journals while 33 are unpublished, unpresented completed projects.

3.3 Compilation for Compendium of Abstracts 2012

A total of 122 research abstracts will be compiled in 'Compendium of Abstracts 2012' and will be published in 2013.

4. HUMAN RESOURCE DEVELOPMENT AND CAPACITY BUILDING

4.1 National Oral Health Survey of Adults 2010 (NOHSA 2010) Seminar

A 4-days seminar on NOHSA 2010 was held from 7 - 10 November 2012 at Holiday Villa Hotel, Selangor, aimed to formulate post-study recommendations. The seminar involved 77 participants including stakeholders from various agencies and 13 presenters. Three areas of concern were identified and the recommendations are used to review policy decisions to improve the oral healthcare delivery in the country for better oral health outcome.

4.2 Other Training

Several officers were sent for various training in 2012:

- Two dental officers were sent to Introductory Statistical Data Analysis workshop on 2-3 May 2012 at Universiti Sains Malaysia, Penang Campus
- Two dental clinical specialists attended the Good Clinical Practice (GCP) Training on 30 October 2012 - 1 November 2012 at the Dynasty Hotel Kuala Lumpur.
- Two Dental Public Health Officers attended the Multivariable STATA Workshop on 5-7 November 2012 at USM, Kelantan Campus
- One dental clinical specialist participated in the Case Mix and Clinical Coding Workshop on 10-11 November 2012 at UKM Medical Centre, Cheras.

ORAL HEALTH TECHNOLOGY

1. CLINICAL PRACTICE GUIDELINES

Clinical Practice Guidelines (CPGs) is a systematically developed statement to assist practitioners to make decisions about appropriate healthcare for specific clinical circumstances. CPGs can be used to reduce inappropriate variations in practice and to promote the delivery of high quality evidence-based healthcare.

The Dental Technology Section provides assistance and input in the process of CPG development through linkages with the Malaysian Health Technology Section (MaHTAS) Ministry of Health, Malaysia.

1.1 Management of Severe Early Childhood Caries (2nd edition)

The development of the CPG on 'Management of Severe Early Childhood Caries' was chaired by a Senior Consultant Paediatric Dentistry, Hospital Sg. Buloh. The 10-members group had successfully completed the 2nd edition and the published CPG was distributed to the states in May 2012.

1.2 Management of Chronic Periodontitis (2nd edition)

The review of this CPG started in 2011 and continued into 2012. The group was headed by a Consultant Periodontist from Johor Bharu. It was presented to the Health Technology Assessment Council meeting chaired by the Director General of Health on 26 November 2012. The CPG was accepted without amendments and will be published in 2013.

1.3 Management of Anterior Crossbite in Mixed Dentition (2nd edition)

The review was initiated in May 2012 headed by a senior consultant orthodontists from Kajang. The 15-members group consists of orthodontists, paediatric dental specialists, dental officers and public health dental officers. The draft was vetted by the Technical Advisory Committee (TAC). The CPG will be presented at the Health Technology Assessment Council meeting in 2013.

1.4 Management of Ameloblastoma (new)

This is a new CPG for oral surgery initiated in 2010. The development group was chaired by a Senior Consultant Oral Surgeon, Hospital Raja Perempuan Zainab II, Kota Bharu, Kelantan. The final draft is expected to be ready for TAC and reviewers' comments in 2013.

1.5 Orthodontic Management of Developmentally Missing incisors (new)

This is a new CPG for the orthodontics speciality initiated in 2011. The development group was chaired a Senior Orthodontic Consultant, Klang. The CPG was approved by the Health Technology Assessment Council on 2 August 2012 and will be published in 2013.

2. LITERATURE SOURCING

Three dental officers applied for University of Malaya virtual library membership and was approved by by the the Oral Health Division (OHD) MOH. The annual fee of RM 100.00 was funded for each person. Search for 35 full articles was done in 2012.

3. APPROVED PURCHASE PRICE LIST (APPL)

Several meetings were held in 2012 coordinated by Procurement and Privatisation Division, MOH and Pharmaniaga Logistics Sdn. Bhd. Matters discussed were mainly related to the supply of items to MOH such as delivery time, penalty on late delivery, product shelf life and product complaints.

3.1 Product Specification for 2014-2017

The specification for 8 products for oral healthcare under APPL (2014-2017) was prepared in 2012 by a committee appointed by the Director General (DG) of Health. The specification was approved by DG of health on 24 December 2012. The approved items consists of:

- Capsulated Dental Amalgam 1 spill
- Capsulated Dental Amalgam 2 spills
- Dental Stone
- Needle Hypodermic Disposable 27Gx22mm
- Needle Hypodermic Disposable 27Gx (41-42)mm
- Dental Plaster of Paris
- Mepivacaine HCL 2% with Adrenalin 1:100,00 injection
- Cotton wool Rolls No. 2

3.2 Product Technical Assessment

In 2012, the technical assessment was conducted on samples of Capsulated Dental Amalgam 1 spill and 2 spills from an alternative supplier at Putrajaya Dental Clinic and Putrajaya Hospital. The technical assessment committee concluded that the product met the specifications and could be considered as an alternative supply.

4. MANAGEMENT OF COMPLAINTS FOR NON-APPL ITEMS

A committee was formed consisting of members from the various health divisions: Medical Development Division, Oral Health Division, Pharmacy, Medical Device Authority and Pharmaniaga Sdn. Bhd to discuss and propose a mechanism in verifying complaints of non-APPL items. This proposal is to be presented at the next consession meeting.

5. MEDICAL DEVICE

The Medical Device Authority was formed based on the requirement for regulation and enforcement of Medical Devices under Section 12, Medical Device Act 2012. A session on law and regulation pertaining to the Medical Device Act 2012 for stakeholders coordinated by the Malaysian Dental Association was held on 8 July 2012 in Kuala Lumpur. The session aimed to increase awareness among the profession to buy registered products to ensure product safety to use on patients.

6. INQUIRY

The Oral Health Technology Section also handled inquiries from various agencies:

6.1 Use of Tooth Whitening Product Containing Hydrogen Peroxide Concentration between 6-35%

The OHD received an inquiry on use of tooth whitening product containing hydrogen peroxide of concentration between 6-35% from the National Pharmarceutical Control Bureau (NPCB) MOH. Based on the best evidence available, the committee concluded the following:

- For home use - tooth whitening products containing less than 10% hydrogen peroxide concentrations and must be prescribed by dental professionals.
- For in-office use only - tooth whitening products with hydrogen peroxide concentrations 10-35% can only be applied by dental professionals.

6.2 Dental Amalgam

Retrospective data on annual consumption of dental amalgam in government dental clinics in Malaysia over 5 years were submitted to the Disease Control Division and the Enforcement Section of Pharmacy Division MOH. The procurement of Dental Amalgam had increase slightly over the years.

ORAL HEALTHCARE

Primary Oral Healthcare
Specialist Oral Healthcare
Community Oral Healthcare
Quality Improvement Initiatives
Oral Health Information System

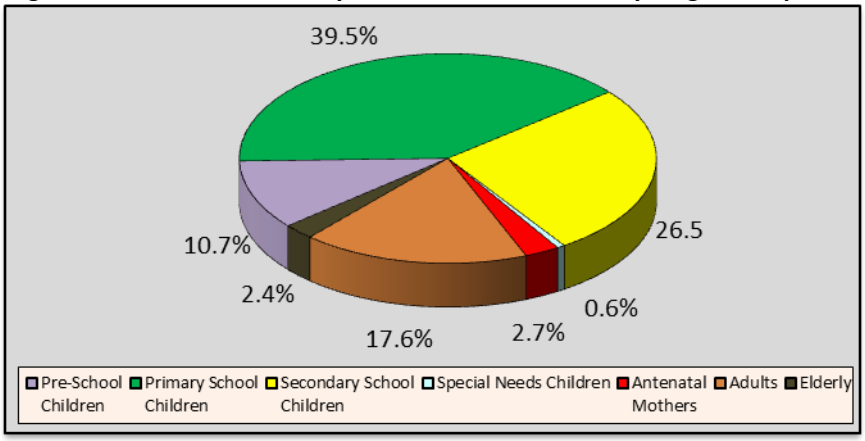
PRIMARY ORAL HEALTHCARE

The Oral Health Division, MOH is responsible to provide oral health services to Malaysians with emphasis on the following groups:

- pre-school children
- schoolchildren
- children with special needs
- ante-natal mothers
- elderly group and
- adults

Overall, there was an increase in the utilisation of primary oral healthcare from 24.3 % in 2011 to 24.8% in 2012 (**Figure 8)**.

Figure 8: Utilisation of Primary Oral Healthcare Service by Target Groups, 2012

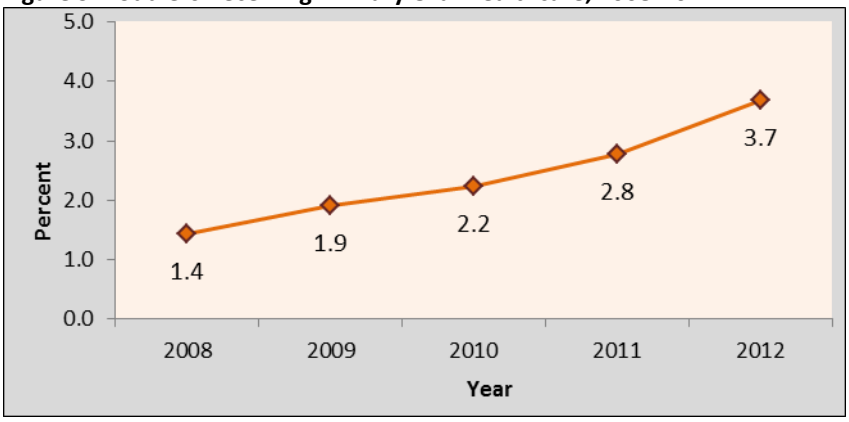


Source: Health Informatics Centre, MOH 2012

1. EARLY CHILDHOOD ORAL HEALTHCARE

There has been a steady increase in the percentage of toddlers receiving primary oral healthcare since 2008 reaching 3.7% in 2012 **(Figure 9)**. At the child care centres or maternal and child clinics, cursory oral examination of toddlers was done through the 'lift-the-lip' technique. Clinical preventive measures such as fluoride varnish were also provided where necessary.

Figure 9: Toddlers Receiving Primary Oral Healthcare, 2008-2012

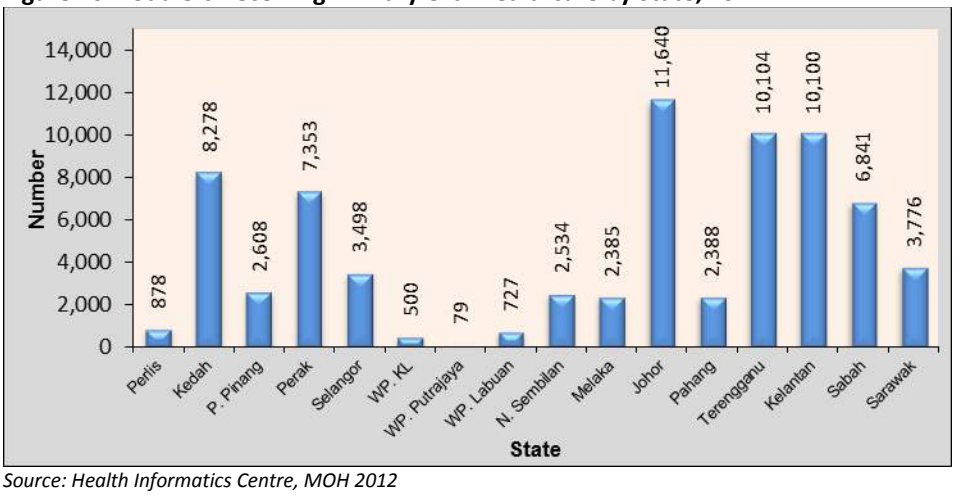


Source: Health Informatics Centre, MOH 2012

Under the PERMATA Negara programme, 809 out of 874 (92.6%) *TASKA Permata* was visited and 77.1% (17,722/22,994) of toddlers examined. In addition, 195 childcare providers from 72 *TASKA Permata* was given oral health education. *TASKA Permata* in Sabah and Sarawak were also provided with 1,210 sets of toothbrush and toothpaste.

In 2012, Johor recorded the highest number of toddlers (11,640) receiving primary oral healthcare **(Figure 10)**.

Figure 10: Toddlers Receiving Primary Oral Healthcare by State, 2012

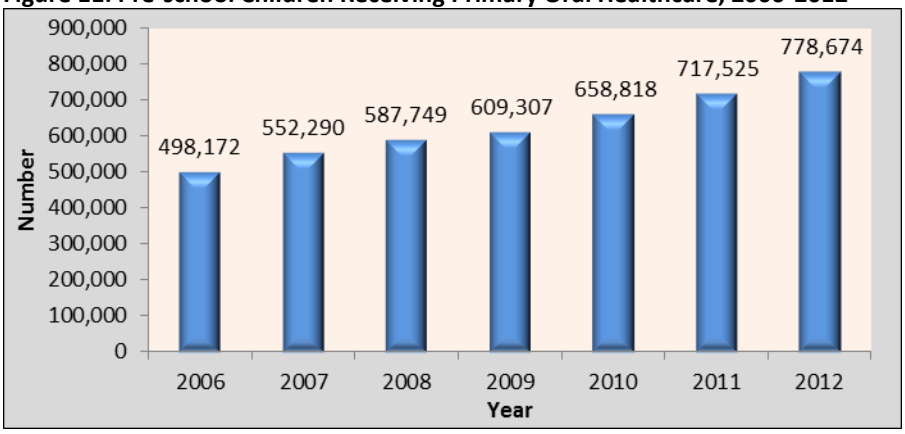


Source: Health Informatics Centre, MOH 2012

2. ORAL HEALTHCARE FOR PRE-SCHOOL CHILDREN

There was a 1.7% increase in the coverage of pre-school children under primary oral healthcare in 2012 compared with 2011 **(Figure 11)**.

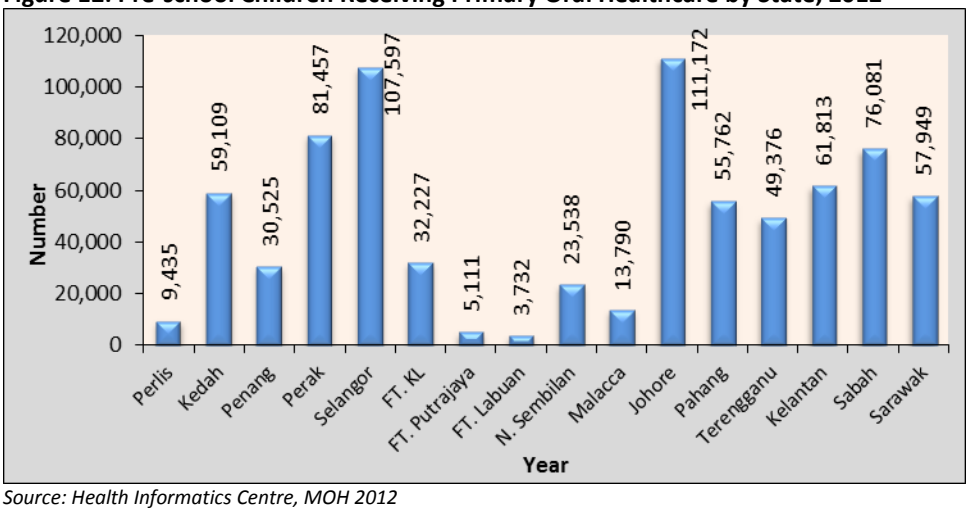
Figure 11: Pre-school Children Receiving Primary Oral Healthcare, 2006-2012



Source: Health Informatics Centre, MOH 2012

The states of Johor, Selangor and Perak recorded the highest number of pre-school children receiving primary oral healthcare **(Figure 12)**.

Figure 12: Pre-school Children Receiving Primary Oral Healthcare by State, 2012



Source: Health Informatics Centre, MOH 2012

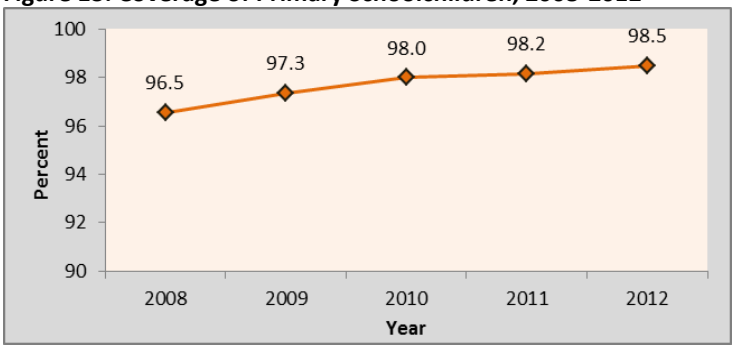
3. ORAL HEALTHCARE FOR SCHOOLCHILDREN

The oral health status of schoolchildren has improved over the years as a result of good coverage and intensive preventive and oral health promotion activities. Hence, the Oral Health Division is looking into the feasibility of introducing a 2-year recall visit for schoolchildren to enable channeling of resources to other target groups. The 2-year recall will be piloted in 2013 in Johor and Federal Teritory (FT) Kuala Lumpur.

3.1 Primary Schoolchildren

Dental nurses with their supporting teams are responsible for oral healthcare for primary schoolchildren. In 2012, there was a slight improvement of 0.3% in the coverage of primary schoolchildren from 2011 **(Figure 13).**

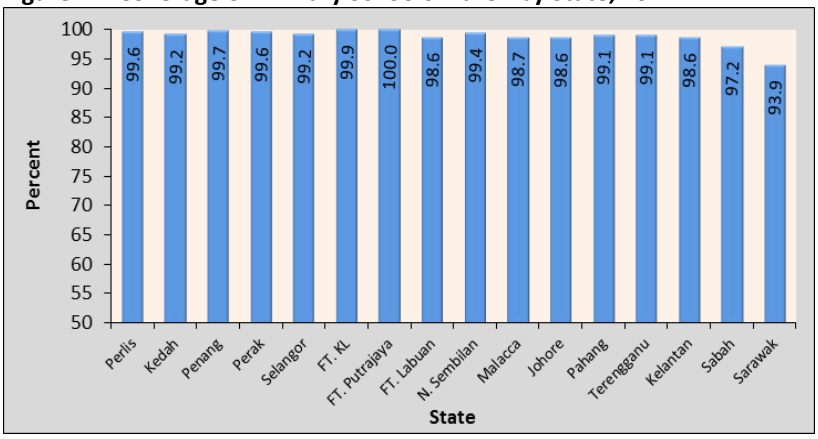
Figure 13: Coverage of Primary Schoolchildren, 2008-2012



Source: Health Informatics Centre, MOH 2012

All states achieved the Key Performance Indicator (KPI) target for coverage (98.5%) except for Sabah (97.2%) and Sarawak (93.6%) (**Figure 14).**

Figure 14: Coverage of Primary Schoolchildren by State, 2012

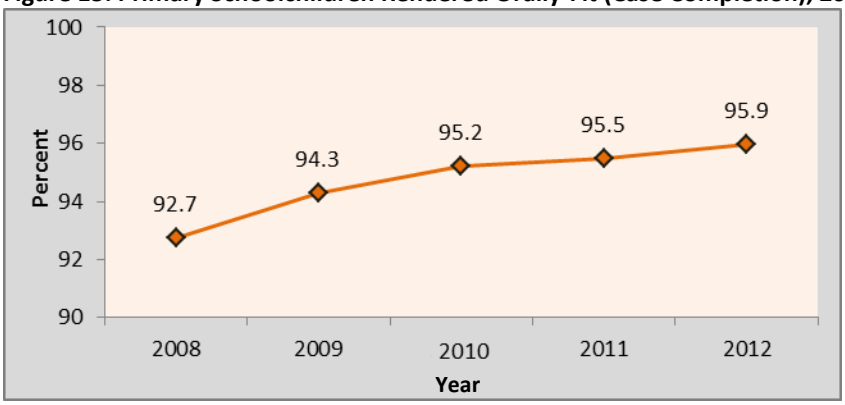


Source: Health Informatics Centre, MOH 2012

The oral health status of primary schoolchildren also showed a slight improvement, 67.1 % did not require any treatment, compared to 66.3% in 2011. The percentage of children with caries-free mouth increased to 33.9% in 2012 from 33.4% in 2011.

Overall, 95.9% of primary schoolchildren were rendered orally-fit **(Figure 15).**

Figure 15: Primary Schoolchildren Rendered Orally-Fit (Case Completion), 2008-2012



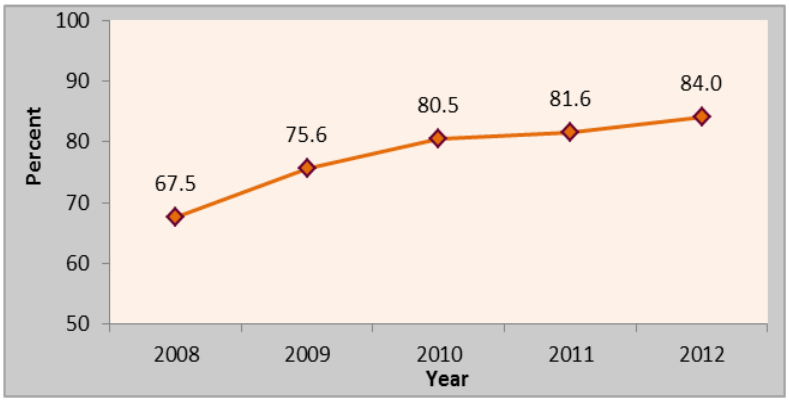
Source: Health Informatics Centre, MOH 2012

3.2 Secondary Schoolchildren

Due to the discrepancy between HIMS data on gingivitis-free mouth of schoolchildren and the findings on periodontal status in NOHSS 2007 survey, a study 'Comparison of Gingivitis-free Mouth of 6 Surfaces Versus 12 Surfaces of 6 Index Teeth among 16-year-old Schoolchildren' was carried out in 2012. The 7-surface index to assess the gingival status was found to give better results compared with the 6-surface index, and was more practical to use than the 12-surface index. The 7-surface index was accepted at the *Jawatankuasa Dasar dan Perancangan Kesihatan Pergigian* (Bil 9/2012) as the method of choice for assessing gingival health status of the schoolchildren.

With the move for dental officers to provide more daily outpatient services in dental clinics, dental nurses are now the main providers for oral healthcare for secondary schoolchildren. Year 2012 showed 2.4% improvement on coverage of secondary schoolchildren from the previous year **(Figure 16)**.

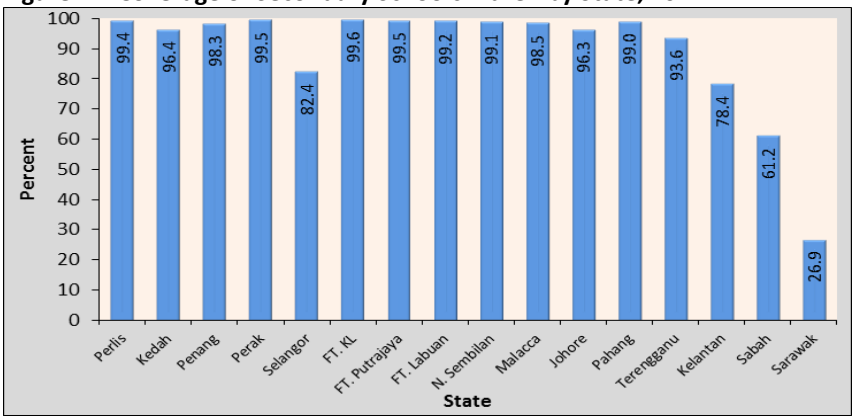
Figure 16: Coverage of Secondary Schoolchildren, 2008-2012



Source: Health Informatics Centre, MOH 2012

Majority of states achieved the KPI 90% coverage target except for Selangor, Kelantan, Sabah and Sarawak **(Figure 17).**

Figure 17: Coverage of Secondary Schoolchildren by State, 2012

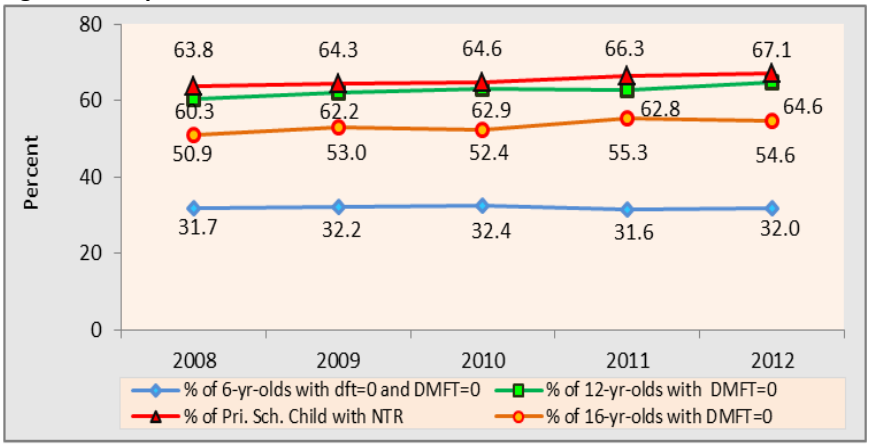


Source: Health Informatics Centre, MOH 2012

3.3 Caries-free Status of Children

Caries-free 6- and 12-year-olds showed a slight increase from 2011 while the 16-year-olds showed a slight decrease. There was also a slight increase in primary schoolchildren who maintained their orally-fit status (NTR) from 2011 to 2012 **(Figure 18)**.

Figure 18: Impact Indicators for School Dental Services, 2008-2012



Source: Health Informatics Centre, MOH 2012

While the mean DMFT score for the 12-year-olds has increased slightly, it remains almost unchanged for the 16-year-olds **(Table 34)**.

Table 34: Mean DMFT Score for 12 & 16-year-olds, 2007-2012

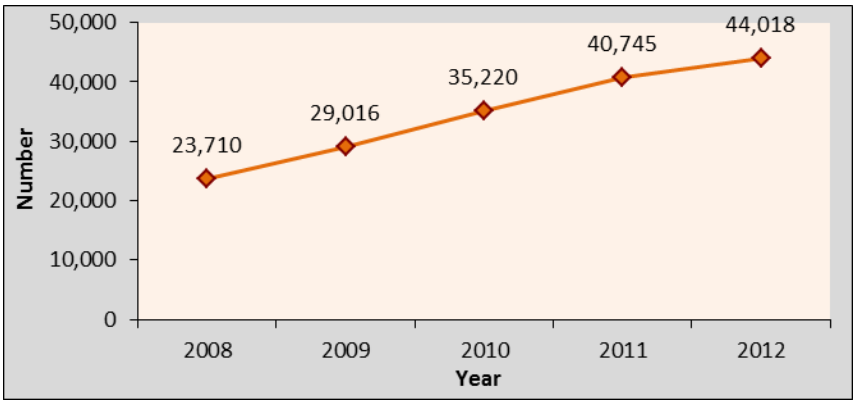
Year	Mean DMFT	
	12-yr-olds	16-yr-olds
2007	1.00	1.56
2008	1.01	1.48
2009	0.97	1.40
2010	0.96	1.44
2011	0.96	1.37
2012	1.09	1.38

Source: Health Informatics Centre, MOH 2012

3.4 Oral Healthcare for Children with Special Needs

The number of children with special needs utilising primary oral healthcare services has been increasing in the past few years. This was further enhanced by initiatives under the 7th National Blue Ocean Strategy 2012 which prioritises health services for the special needs group, the elderly and single mothers. Overall, in 2012, a total of 44,010 special needs children received oral healthcare **(Figure 19).**

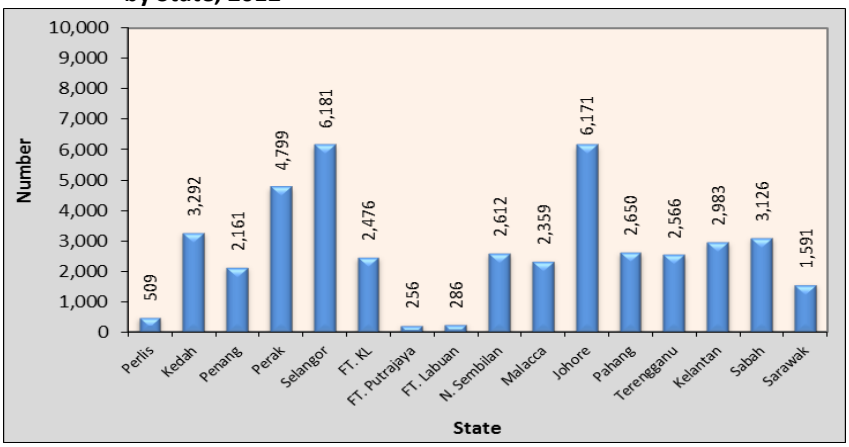
Figure 19: Children with Special Needs Receiving Primary Oral Healthcare, 2008- 2012



Source: Health Informatics Centre, MOH 2012

The highest numbers of children seen were in Selangor, Johor and Perak **(Figure 20).**

Figure 20: Children with Special Needs Receiving Primary Oral Healthcare by State, 2012

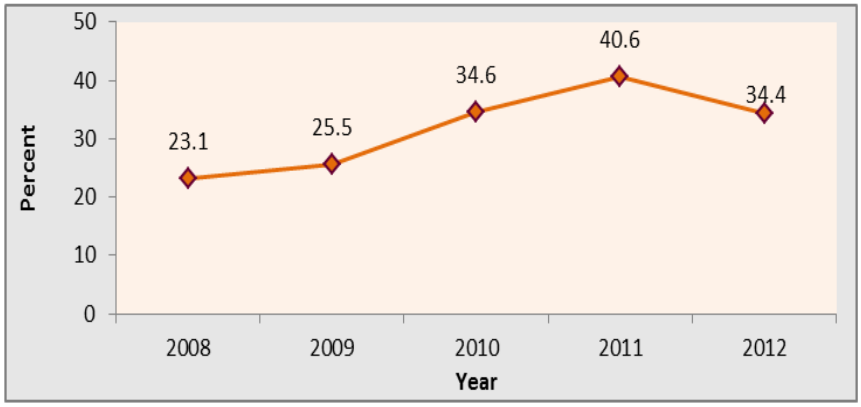


Source: Health Informatics Centre, MOH 2012

3.5 Oral Healthcare for Antenatal Mothers

Antenatal mothers are regarded as change agent for the family. Antenatal mothers are referred to the dental clinic as their routine antenatal check-up. Efforts have been made to increase antenatal mothers' attendances to the dental clinics. There was an increasing trend from 2008 to 2011. However, percentage of coverage dropped from 40.6% in 2011 to 34.4% in 2012 (**Figure 21).**

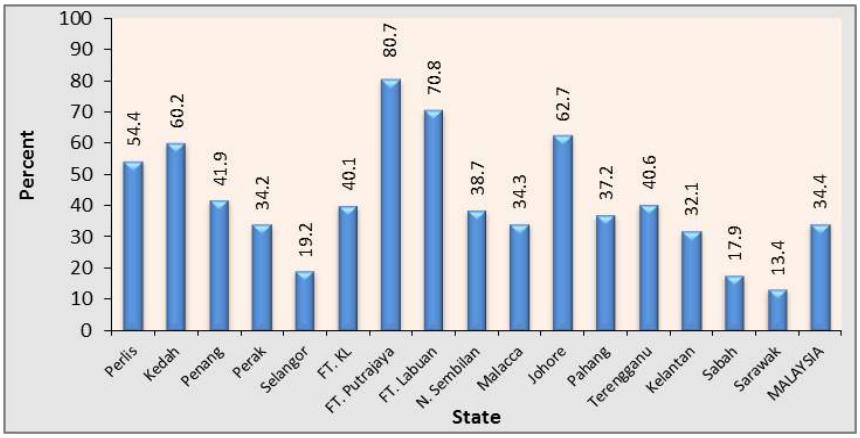
Figure 21: Coverage of Antenatal Mothers, 2008-2012



Source: Health Informatics Centre, MOH 2012

The highest percentage of antenatal mothers' rendered oral healthcare was in Putrajaya, followed by Labuan and Johor **(Figure 22)**.

Figure 22: Antenatal Mothers Receiving Primary Oral Healthcare by State, 2012



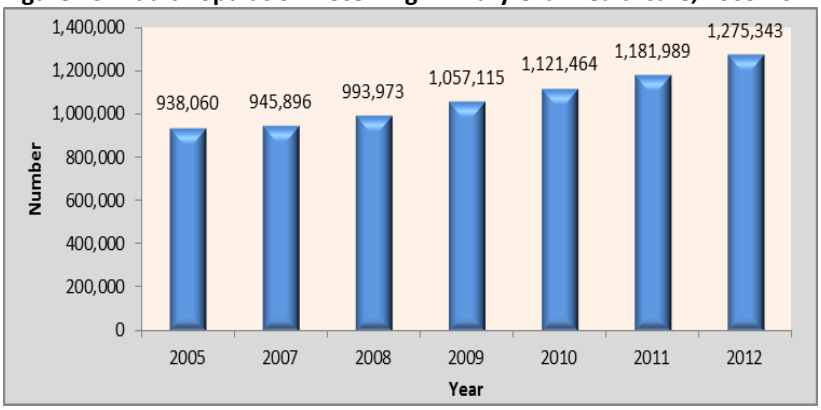
Source: Health Informatics Centre, MOH 2012

3.6 Oral Healthcare for Adults

Oral Healthcare for adults is provided at various dental facilities and through outreach services. In 2012, oral healthcare was also provided at new locations - the Urban Transformation Centres (UTCs) and Rural Transformation Centres (RTCs). The UTC dental clinics are located in Melaka Tengah and Pudu Sentral, FT Kuala Lumpur. They operate from 8.00 am to 10.00 pm. The mobile dental teams provide services at RTCs in Gopeng, Perak, Wakaf Che Yeh, Kelantan, Kuala Linggi and Melaka. A total of 4,892 people utilised the UTCs in year 2012, while 912 utilised the RTCs since the launch of the facilities in 2012.

With increasing demand for oral healthcare, dental clinics providing daily outpatient services was adopted as a key performance indicator (KPI). To date, there are 87.9% (277/315) dental clinics with ≥2 dental officers provide daily outpatient services. Over the years, the adult utilisation of primary oral healthcare has increased steadily **(Figure 23).**

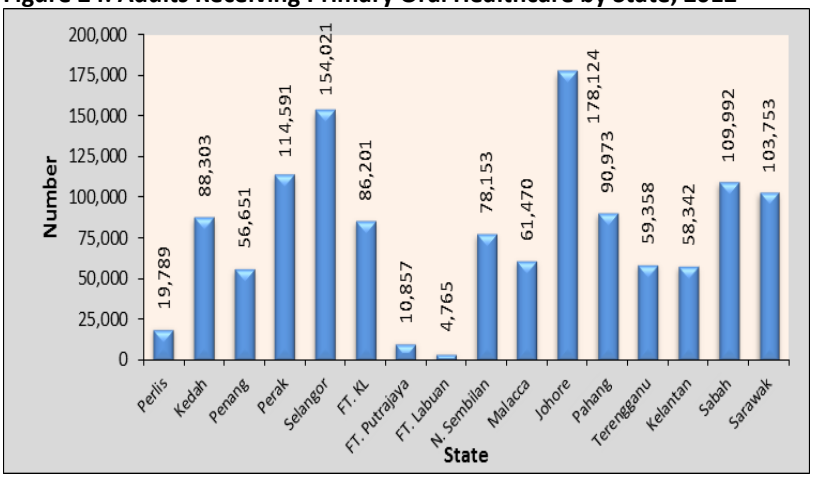
Figure 23: Adult Population Receiving Primary Oral Healthcare, 2005-2012



Source: Health Informatics Centre, MOH 2012

The highest numbers were in Johor and Selangor **(Figure 24)**.

Figure 24: Adults Receiving Primary Oral Healthcare by State, 2012



Source: Health Informatics Centre, MOH 2012

To further improve the provision of endodontic treatment, the Oral Health Division has equipped 21 clinics with endodontic equipment, and trained dental officers on posterior endodontics by the end of 2012.

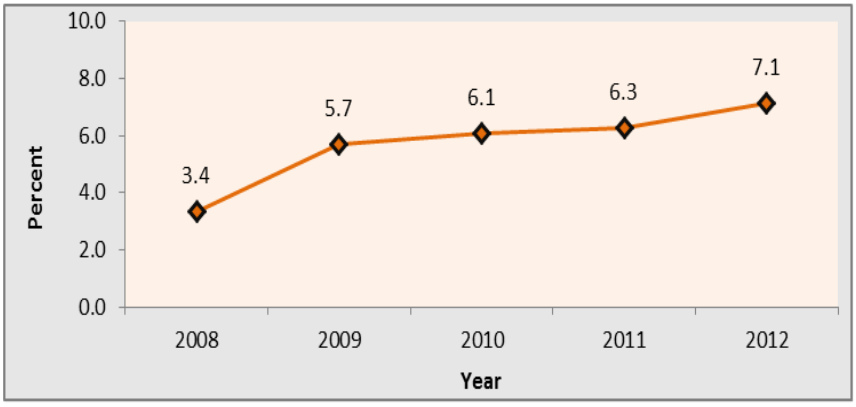
3.7 Oral Healthcare for the Elderly

In 2012, the elderly represented 8.3% (2.4 million) of the Malaysian population, and this is expected to reach 3.4 million by 2020. Malaysia is expected to reach ageing nation status by 2030, where 15% of the population will be 60 years old and above. This heralds a focus on oral healthcare needs of

the elderly. The service target for elderly outreach programmes increased with the NBOS 7 initiatives and it is hoped that the elderly will have better accessibility to oral healthcare and ultimately, improved oral health status.

In 2012, 7.1% (173,580) of elderly, including 6,378 elderly in 317 institutions, were rendered oral healthcare (**Figure 25**).

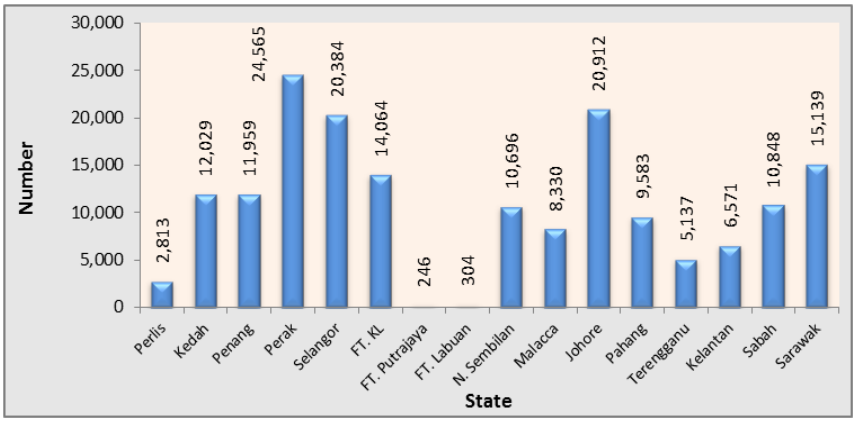
Figure 25: Elderly Population Receiving Primary Oral Healthcare, 2008-2012



Source: Health Informatics Centre, MOH 2012

The most number of elderly seen were in Perak, followed by Johor and Selangor **(Figure 26)**.

Figure 26: Elderly Population Receiving Primary Oral Healthcare by State, 2012



Source: Health Informatics Centre, MOH 2012

Despite the increase in elderly utilising oral healthcare facilities, their oral health status is still below satisfactory. Only 34.9% of 60-year-olds have 20 or more teeth **(Table 35)** which is way below the targeted goal of 60% in the National Oral Health Plan 2011-2020. The average number of teeth present in

the elderly age 75 years and above has remained at 9.5 and the edentulous showed a slight increase from 25.8% in 2011 to 26.1% in 2012.

Table 35: Oral Health Status of the Elderly by Age Group, 2012

Age group (yr)	Average no. of teeth present		Edentulous (%)		With 20 or more teeth(%)	
	2011	2012	2011	2012	2011	2012
60	14.6	14.6	11.0	11.0	35.3	34.9
65	12.9	13.8	14.5	14.4	28.2	28.7
75 and above	9.5	9.5	25.8	26.1	16.6	16.9

Source: Health Informatics Centre, MOH 2012

3.8 Oral Healthcare for Orang Asli

Beginning 1st January 2012, the MOH has taken over the oral health services for Orang Asli from the the Department of Orang Asli Development (JAKOA), Ministry of Rural and Regional Development Malaysia. Thus far, 36,048 Orang Asli were rendered primary oral healthcare in 2012 compared with 33,096 in 2011. A total of 93 Orang Asli schools were visited and 19,661 Orang Asli primary schoolchildren were covered.

SPECIALIST ORAL HEALTHCARE

1. DENTAL SPECIALIST SERVICES

The eight clinical dental specialist disciplines in the MOH consist of Oral Surgery, Orthodontics, Paediatric Dentistry, Periodontics, Oral Pathology & Oral Medicine, Restorative Dentistry and Special Care Dentistry.

By year 2012, there were 161 clinical dental specialists and 122 Dental Public Health Officers in the Ministry of Health, Malaysia **(Table 36).**

Table 36: Clinical Dental Specialists in MOH, 2006-2012

Year / Discipline	2006	2007	2008	2009	2010	2011	2012
Oral Surgery	36	42	42	45	45	45 (*4)	48 (*3)
Orthodontics	26	31	29	30	32	25 (*5)	34 (*6)
Paediatric Dentistry	20	21	21	25	25	27	29
Periodontics	17	19	18	18	19	20	21
Oral Pathology/ Medicine	6	6	6	6	8	9	9
Restorative Dentistry	9	10	10	14	14	16	17
Special Needs Dentistry	0	0	0	0	0	0	2
Forensic Dentistry	0	0	0	0	0	0	1
TOTAL CLINICAL SPECIALISTS	**114**	**129**	**126**	**138**	**143**	**142 (*9)**	**161 (*9)**
Dental Public Health Specialists	118	118	123	129	129	123	122

Source: Oral Health Division, MOH 2012
(Not Inclusive of specialist undergoing gazettement)
**Contract Dental Specialist*

At present, there are 44 dental officers pursuing various dental specialties **(Table 37).**

Table 37: Dental Officers Undergoing Post-graduate Training, 2012

SPECIALTIES	LOCAL	ABROAD	TOTAL
1. Oral Surgery	8	4	12
2. Orthodontics	0	9	9
3. Paediatric Dentistry	3	2	5
4. Periodontics	3	2	5
5. Restorative Dentistry	3	3	6
6. Oral Pathology & Oral Medicine	1	4	5
7. Special Needs Dentistry	0	1	1
8. Dental Public Health	1	0	1
Total	**19**	**25**	**44**

Source: Oral Health Division, MOH 2012

Four specialist oral health services were established in six facilities in 2012 **(Table 38).**

Table 38: New Specialty Services Established, 2012

Specialty	New services established	Hospital / Dental Facilities
1. Oral Surgery	2	*Hosp. Teluk Intan, Perak* *Hosp. Tawau, Sabah*
2. Orthodontic	2	*Dental Clinic Sibu, Sarawak* *Dental Clinic Tudan, Miri, Sarawak*
3. Periodontology	1	*Dental Clinic* *Paya Besar*, Pahang
4. Restorative Dentistry	1	*Dental Clinic Bukit Payung, Terengganu*
Total	**6**	

Source: Oral Health Division, MOH 2012

2. DENTAL SPECIALTY ACTIVITIES

2.1 Dental Specialist Meetings

Dental Specialist meetings for each discipline were conducted to discuss Key Performance Indicators, National Indicator Approach, Patient Safety Indicators and establishment of National Oral Health Centre **(Table 39).**

Table 39: Dental Specialist Meetings, 2012

Specialty	Date	Venue
Dental Public Health	23-24 Feb 2012	Hotel Mahkota, Melaka
Oral Maxillofacial	26-27 March 2012	Le Grandeur Palm Resort, Johor
Oral Pathology / Oral Medicine	26-27 March 2012	Le Grandeur Palm Resort, Johor
Orthodontics	12-13 April 2012	Hotel Promenade, Kota Kinabalu, Sabah
Periodontics	8-10 May 2012	Hotel Ri-Yaz Heritage, Pulau Duyung, Terengganu
Restorative Dentistry	8-10 May 2012	Hotel Ri-Yaz Heritage, Pulau Duyung, Terengganu
Paediatric Dentistry	13-15 May 2012	Hotel Grand Bluewave, Shah Alam, Selangor
Combined Dental Specialists Meeting	3-5 Dis 2012	Hotel Hatten, Melaka

Source: Oral Health Division, MOH 2012

Combined Dental Specialists Meeting 3-5 December 2012 Hotel Hatten, Melaka

2.2 Training

In keeping abreast with the latest technology and knowledge, nine Dental Specialists were sent abroad for training in their respective fields in 2012 **(Tables 40).**

Table 40: In-Service Training for Dental Specialists, 2009-2012

Year	Oral Surgery	Oral Pathology / Medicine	Orthodontics	Paediatric Dentistry	Periodontics	Restorative Dentistry	Total
2009	5	0	2	5	2	1	15
2010	6	1	5	5	3	0	20
2011	8	1	9	3	1	2	24
2012	1	0	2	2	1	3	9

Source: Oral Health Division, MOH 2012

The details of training for 3 specialities are as shown in **Table 41**.

Table 41: In-Service Training Attended By Specialists, 2012

No	Specialty	Course	Place
1	Oral & Maxillofacial Surgery	Dental Implant Disaster	Universiti Shanghai Jiao Tong, China
2	Paediatric Dentistry	Clinical Hypnosis and Sedation	I Eastman Dental Institute, London II British Society of Clinical & Academic Hypnosis, London III Society for Advancement of Anaesthesis for Dentistry, Queen Mary of London
3	Paediatric Dentistry	Dental Traumatology Registry	Institute of Odontology, Gothenburg, Sweden

Source: Oral Health Division, MOH 2012

2.3 Monitoring of Specialist Oral Healthcare Programme

The workload of dental specialists is reflected as a ratio of specialist to patients seen **(Table 42).**

Table 42: Workload of Dental Specialist by Disciplines, 2010-2012

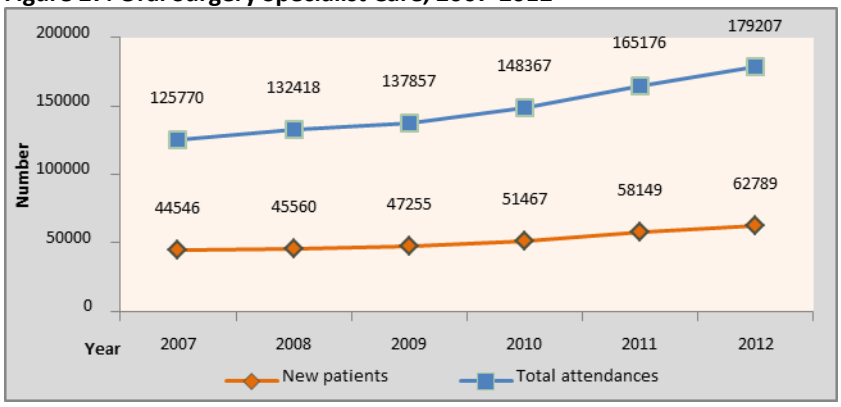
No.	Specialty	Workload		
		2010	2011	2012
1	Paediatric Dentistry	1:2,979	1:3,264	1:3144
2	Oral and Maxillofacial Surgery	1:2,799	1:2,950	1:2,950
3	Restorative Dentistry	1:1,244	1:1,332	1:1495
4	Orthodontics	1:3,235	1:2,754	1: 2362
5	Periodontics	1:1,374	1:1,494	1:1627
6	Oral Pathology and Oral Medicine	1:463	1:527	1:816

Source: Oral Health Division, MOH 2012

2.4 Oral Surgery

There was an increase in attendances every year since 2007 with the expansion in specialists services in the hospital **(Figure 27).** On average, a patient would make three visits per year for an oral surgical case.

Figure 27: Oral Surgery Specialist Care, 2007-2012

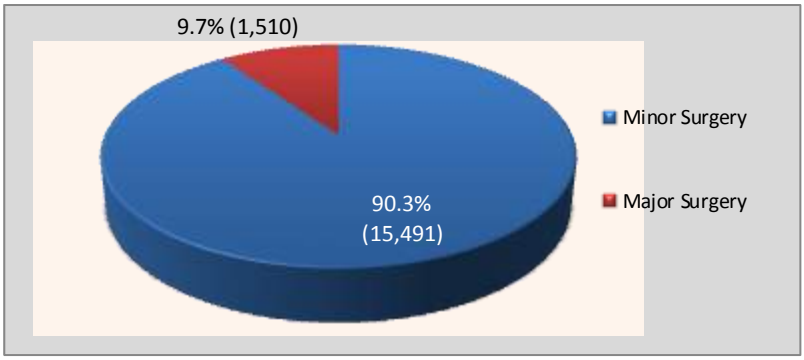


Source: Health Informatics Centre, MOH 2012

There were 17,001 surgical cases seen by the MOH Oral Surgeons in 2012. Majority (90.3%) were minor surgeries such as pre-prosthetic and pre-orthodontic procedures, removal of impacted teeth, biopsies, excision/

ablative surgeries and removal of retained/ displaced roots. Major surgery cases (9.7%) consist of malignant lesions, secondary or primary facial reconstruction, cleft lip and palate, orthognathic surgery and distraction osteogenesis **(Figure 28).**

Figure 28: Proportion of Surgical Cases Seen, 2012



Source: Health Informatics Centre, MOH 2012

Total new attendances for oral specialist care have increased with the highest percentage from the 18 years and above age group **(Table 43).**

Table 43: Oral Surgery Specialist Care, 2007 – 2012

Category of Patients	New Patients					Total Attendance				
	2008	2009	2010	2011	2012	2008	2009	2010	2011	2012
< 6 yrs old	881	703	773	822	755	2261	1555	1512	1648	1447
7-12 yrs old	883	770	780	810	735	2556	1956	1774	1932	1712
13-17 yrs old	2219	2397	2654	3040	3168	7464	8452	8884	10139	10216
> 18 yrs old	41577	43385	47260	53477	58131	120137	125894	136197	151457	165832
Total	**45560**	**47255**	**51467**	**58149**	**62789**	**132418**	**137857**	**148367**	**165176**	**179207**

Source: Health Informatics Centre, MOH 2012

Oral Surgery and Oral Pathology & Oral Medicine Specialist Meeting at Le Grandeur Palm Resort, Johor, 26-27 Mar 2012

2.5 Oral Pathology and Oral Medicine

The attendance for Oral Pathology and Oral Medicine has increased steadily over the years. The highest are from the 30-59 years old group **(Table 44).**

Table 44: Attendances for Oral Pathology and Oral Medicine, 2009-2012

Age Category of Patient	New Patients				Total Attendance			
	2009	2010	2011	2012	2009	2010	2011	2012
< 6	4	24	28	38	4	37	37	74
7-12	17	27	29	67	18	37	46	90
13-17	42	70	99	127	59	124	171	250
18-29	129	197	239	313	261	467	502	692
30-59	517	745	803	1012	1524	2288	2511	3330
≥60	279	370	429	522	951	1217	1479	1884
Total	**988**	**1433**	**1627**	**2079**	**2817**	**4170**	**4746**	**6302**

Source: Health Informatics Centre, MOH 2012

There was an increase in oral medicine cases, and number of reports and slides for oral pathology cases **(Table 45).** In 2012, there were nine OP/OM specialists, with a ratio of 1 : 700 patients.

Table 45: Oral Pathology & Oral Medicine Cases Seen, 2010 - 2012

Age Category of Patient	Oral Medicine			Oral Pathology					
	2010	2011	2012	2010		2011		2012	
				Reports	Slides	Reports	Slides	Reports	Slides
< 6	16	11	36	12	33	20	32	18	53
7-12	20	18	45	61	81	73	114	124	219
13-17	40	56	67	96	169	116	262	141	319
18-29	111	152	252	167	357	279	561	226	524
30-59	392	749	1097	789	1701	700	1864	1081	2588
≥60	214	466	589	142	390	187	687	239	849
Total	**793**	**1452**	**2086**	**1267**	**2731**	**1375**	**3520**	**1829**	**4552**

Source: Health Informatics Centre, MOH 2012

2.6 Orthodontics

In 2012, with the set up of resident orthodontist in two facilities, there is an increase in attendance of patients. Majority were secondary school children aged 13-17 **(Table 46).** Similar to previous year, the 2012 data showed that an orthodontic patient makes an average of 4 visits per year.

Table 46: Orthodontic Specialist Care, 2008 – 2012

Age Category Of Patients	New Patients				Total Attendance			
	2009	2010	2011	2012	2009	2010	2011	2012
< 6	129	141	134	137	192	241	239	289
7-12	2813	2879	3170	3454	7226	7654	8118	9365
13-17	14480	15348	16557	18403	52948	56243	59442	68134
18-29	10452	11592	13364	15060	45088	50772	57317	66338
30-59	295	376	406	481	1339	1548	1603	2056
>18	10747	11968	13770	15541	46427	52320	58920	68394
Total	**28169**	**30336**	**33631**	**37535**	**106793**	**116458**	**126719**	**146182**

Source: Health Informatics Centre, MOH 2011

Over the years there has been there is an increase in number of active cases completed and patients issued with removable and fixed appliances. In 2012, a total of 6733 patients were treated with fixed appliances **(Table 47).**

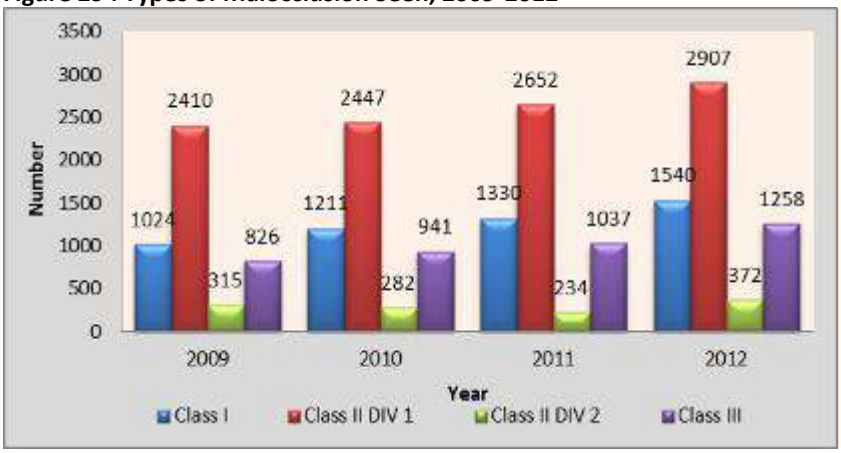
Table 47: Orthodontic Cases by Items of Care, 2009-2012

Items of Care		2009	2010	2011	2012
Consultation	I	9311	9932	9888	11542
	II	4575	4881	5253	6079
Removable Appliances	No. of Patients	4057	4032	4693	5373
Fixed Appliances	No. of Patients	5750	5596	5726	6733
Number of active treatment cases		13705	15829	16879	19380
Active treatment completed		2611	2429	2951	3314

Source: Health Informatics Centre, MOH 2012

Almost half the cases were Class II Div I. There has been an increasing trend in all types of malocclusion from year 2009 to 2012 **(Figure 29).**

Figure 29 : Types of Malocclusion Seen, 2009-2012



Source: Health Informatics Centre, MOH 2011

Orthodontics Specialist Meeting 12-13 April 2012. Hotel Promenade, Kota Kinabalu, Sabah

2.7 Paediatric Dentistry

Paediatric Dental Speciality attended to children below 17 years old. There has been a steady increase of new patients in the past four years **(Table 48).** The increase was noted in all categories of age groups. On average, a patient makes 3 visits in a year.

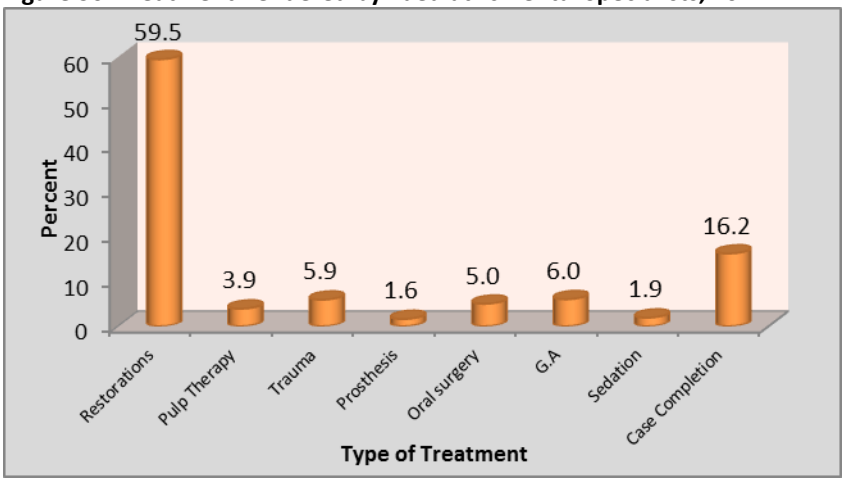
Table 48: Paediatric Dental Specialist Care, 2008-2012

Category of Patients	No. of New Patients				Total Attendance			
	2009	2010	2011	2012	2009	2010	2011	2012
<6	7573	8866	10555	12056	22172	25647	30654	33022
7-12	6678	7753	9034	10247	22253	25028	28801	31249
13-17	3795	4396	4768	5364	11884	13588	14824	15754
SUBINTIOTAL	**18046**	**21015**	**24357**	**27667**	**54979**	**64233**	**74279**	**80025**
Children with special needs	6811	7919	8750	9626	22215	25120	26896	28438

Source: Health Informatics Centre, MOH 2012

The types of treatment rendered by Paediatric Dental Specialists are shown in **Figure 30.** More than half were restorations (59.5%), and about 8% were done under general anaesthesia or sedation.

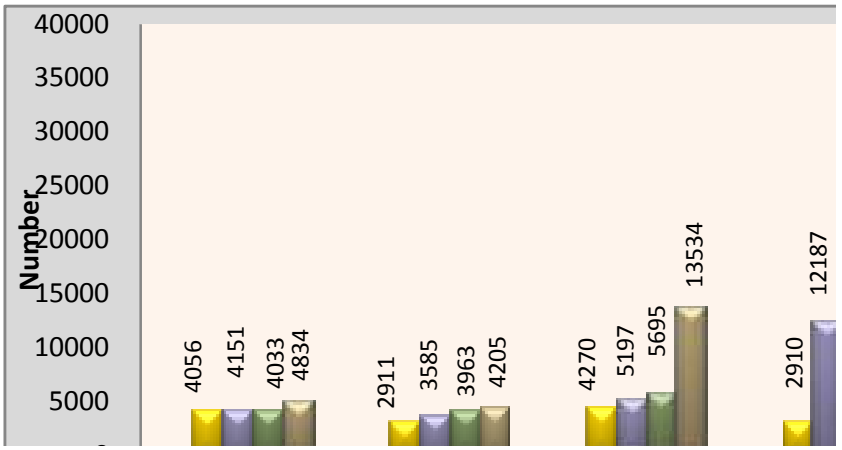
Figure 30: Treatment Rendered by Paediatric Dental Specialists, 2012



Source: Health Informatics Centre, MOH 2011

Paediatric Dental Specialists also manages children with special needs. These patients are categorised under the following groups: physical abnormalities, mental retardation, multiple abnormalities and medically-compromised. There was an overall increase in cases, especially children with multiple abnormalities **(Figure 31).** Management of these challenging patients include preventive and curative care. Preventive care includes oral hygiene instructions to carers and clinical prevention modalities.

Figure 31: Dental Paediatric Patients' Attendance According to Health Status, 2009-2012



Source: Health Informatics Centre, MOH 2011

Paediatric Dentistry Specialist Meeting 13-15 May 2012, Hotel Grand Bluewave Shah Alam, Selangor

2.8 Periodontics

There were 24 Periodontists in 2012. Total number of patients seen by the specialty has increased, with the highest increment are among 18 years old and above **(Table 49).** A patient treated for periodontal problems makes an average of four visits per year.

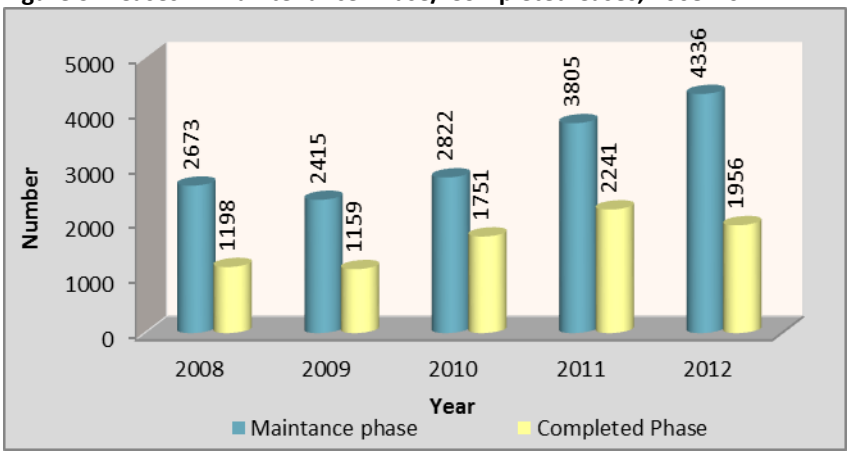
Table 49: Periodontic Specialist Care, 2009-2012

Category Of Patients	No. Of New Patients				Total Attendance			
	2009	2010	2011	2012	2009	2010	2011	2012
7-12 yrs old	108	125	184	102	194	211	283	198
13-17 yrs old	310	321	324	278	838	907	724	764
>18 yrs old	6114	7144	8110	8413	23402	27736	30370	33203
TOTAL	**6532**	**7590**	**8618**	**8793**	**24434**	**28854**	**31377**	**34165**

Source: Health Informatics Centre, MOH 2012

Over five years, the number of cases under maintenance phase has increased steadily **(Figure 32).**

Figure 32: Cases in Maintenance Phase/ Completed Cases, 2008-2012



Source: Health Informatics Centre, MOH 2012

Periodontics and Restorative Dentistry Specialist Meeting 8-10 May 2012 at Hotel Ri-Yaz Heritage, Pulau Duyung, Kuala Terengganu

2.9 Restorative Dentistry

With three new restorative dental specialists in 2012, the total number stands at 21, with a marked increase in attendance over the last five years. The highest attendance was among the 30 to 59-year-old age group **(Table 50).** On average, each patient made three visits per year.

Table 50: Attendances for Restorative Dentistry, 2009 – 2012

Age Category of Patients	No. Of New Patients				Total Attendance			
	2009	2010	2011	2012	2009	2010	2011	2012
7-12	96	133	97	111	189	215	159	175
13-17	444	485	517	557	962	1146	1148	1154
18-29	1145	1374	1619	1902	2736	3294	3902	4363
30-59	3297	3974	4798	5325	9802	11603	14495	15187
≥60	812	988	1274	1429	3110	3645	4274	4529
TOTAL	**5794**	**6954**	**8305**	**9324**	**16799**	**19903**	**23978**	**25408**

Source: Health Informatics Centre, MOH 2011

Majority of the cases were endodontic, followed by crowns and bridges **(Table 51).**

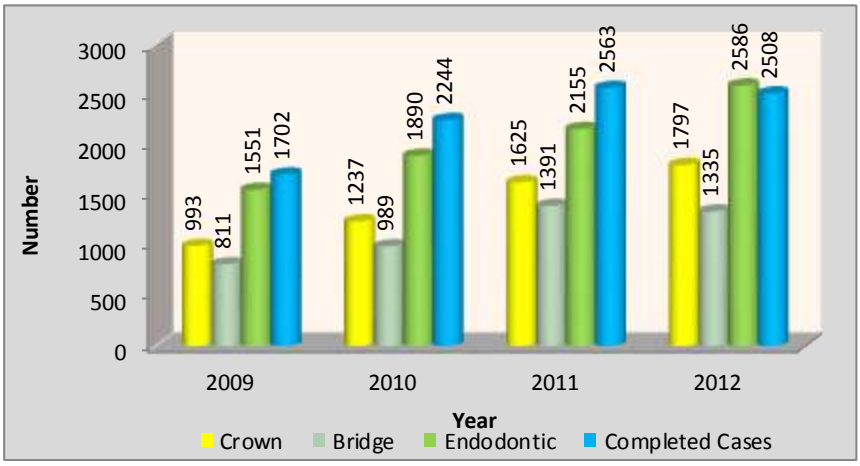
Table 51: Endodontic, Crowns and Bridges Rendered, 2009– 2012

Age Category of Patients	CROWN				BRIDGE				ENDODONTIC			
	2009	2010	2011	2012	2009	2010	2011	2012	2009	2010	2011	2012
7-12	1	2	1	0	0	0	0	0	23	16	20	27
13-17	32	57	34	32	24	6	25	8	105	124	149	135
18-29	185	244	272	312	104	135	162	137	317	404	411	430
30-59	611	743	1029	1158	543	709	957	968	878	1116	1295	1349
≥60	164	191	289	297	140	139	247	222	228	230	280	278
TOTAL	**993**	**1237**	**1625**	**1797**	**811**	**989**	**1391**	**1337**	**1551**	**1890**	**2155**	**2219**

Source: Health Informatics Centre, MOH 2012

The number of endodontic and crown cases has shown a steady increase over the past four years **(Figure 33).**

Figure 33: Type of cases seen by MOH Restorative Specialist, 2009 – 2012



Source: Health Informatics Centre, MOH 2012

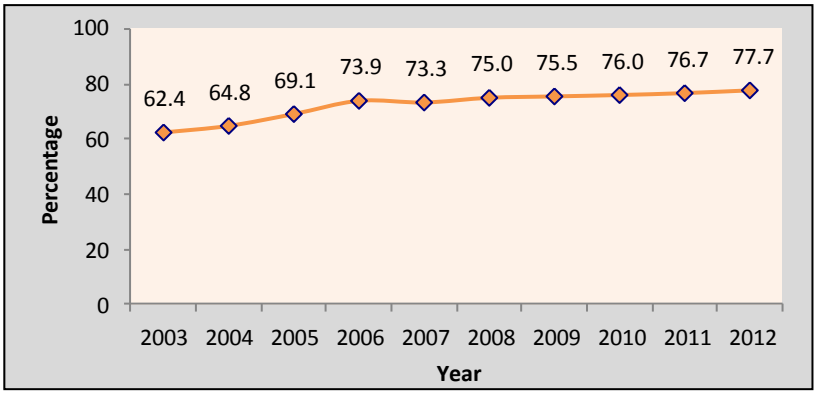
COMMUNITY ORAL HEALTHCARE

1. FLUORIDATION OF PUBLIC WATER SUPPLY

1.1 Population Coverage

The year 2012 marked the 40th anniversary of cabinet approval for the water fluoridation programme. 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 estimated population receiving fluoridated water has increased from 76.7% in 2011 to 77.7% in 2012 **(Figure 34)**.

Figure 34: Population Coverage for Water Fluoridation Programme, 2003-2012

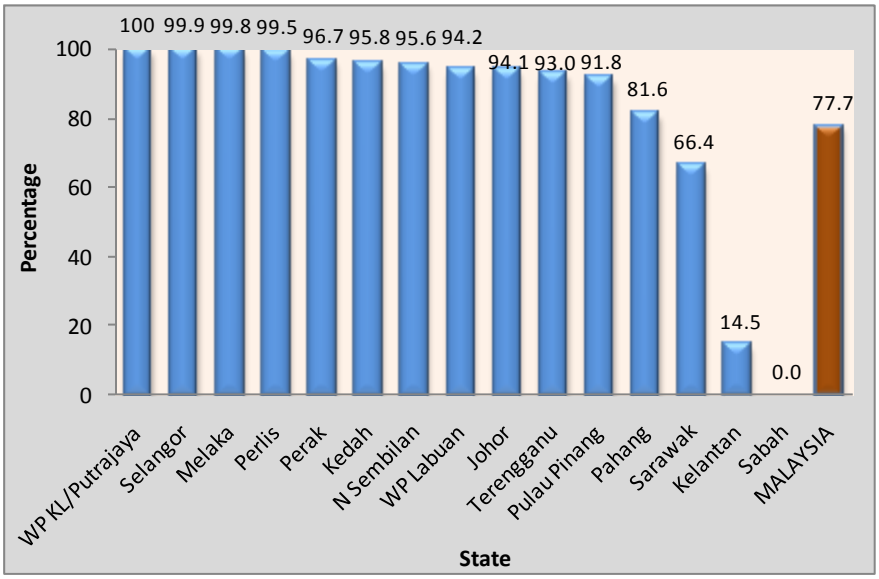


Source: Oral Health Division, 2012

All states achieved over 90% population coverage except for Pahang, Sarawak, Kelantan and Sabah **(Figure 35)**.

In Sabah, re-activation of the water fluoridation programme was approved by the State Cabinet Committee on 6 October 2010. However, the installation of fluoride feeders and programme implementation remain challenging due to issues of funding and technical problems.

Figure 35: Population Receiving Fluoridated Water by State, 2012



Source: Oral Health Division, 2012

1.2 Water Treatment Plants (WTP)

In 2012, there were a total of 472 WTP in Malaysia **(Table 52).**

Table 52: Water Treatment Plant by Sector, 2012

State	Government	Water Board	Private	Total
Perlis	3	0	0	3
Kedah	0	0	36	36
Pulau Pinang	0	0	9	9
Perak	0	41	5	46
Selangor	0	0	30	30
WP KL/Putrajaya	0	0	3	3
N. Sembilan	0	0	22	22
Melaka	0	0	8	8
Johor	0	0	45	45
Pahang	76	0	0	76
Terengganu	0	0	14	14
Kelantan	0	0	27	27
Sabah	33	0	19	52
WP Labuan	4	0	1	5
Sarawak	80	11	5	96
Total	**189**	**52**	**227**	**472**

Note: Pengurusan Air Pahang Berhad (PAIP) is a company fully owned by the Pahang State Government

WTP are fully privatized except for those in Perlis, Perak, Pahang, Sabah, Sarawak and FT Labuan. Out of which 298 (63.1%) were installed with fluoride feeders **(Table 53)**. Among those with feeders, 272 (91.3%) were active while 26 (8.7%) were inactive due to lack of resources to purchase fluoride compounds. Other fluoride feeders require repairs or replacement.

In 2012, WTP in Perlis, Penang, Federal Territory Kuala Lumpur/Putrajaya, Melaka and Terengganu were producing fluoridated water. However, less than 50% of WTP in Sarawak, FT Labuan, Kelantan, and Sabah produced fluoridated water **(Table 53)**.

Table 53: WTP with Active Fluoride Feeders by State, 2012

State	No. of WTP	WTP with Fluoride Feeder		WTP with Active Fluoride Feeder		WTP Producing fluoridated water (%)
		No.	%	No.	%	
Perlis	3	3	100.0	3	100.0	100.0
Kedah	36	32	88.9	32	100.0	88.9
Penang	9	9	100.0	9	100.0	100.0
Perak	46	43	93.5	43	100.0	93.5
Selangor	30	29	96.7	29	100.0	96.7
FTKL/ Putrajaya	3	3	100.0	3	100.0	100.0
N. Sembilan	22	19	86.4	19	100.0	86.4
Melaka	8	8	100.0	8	100.0	100.0
Johor	45	32	71.1	32	100.0	71.1
Pahang	76	53	69.7	42	79.2	55.3
Terengganu	14	14	100.0	14	100.0	100.0
Kelantan	27	3	11.1	3	100.0	11.1
Sabah	52	11	46.2	0	0.0	0.0
FT Labuan	5	4	80.0	1	25.0	20.0
Sarawak	96	35	36.5	34	97.1	35.4
MALAYSIA	**472**	**298**	**63.1**	**272**	**91.3**	**57.6**

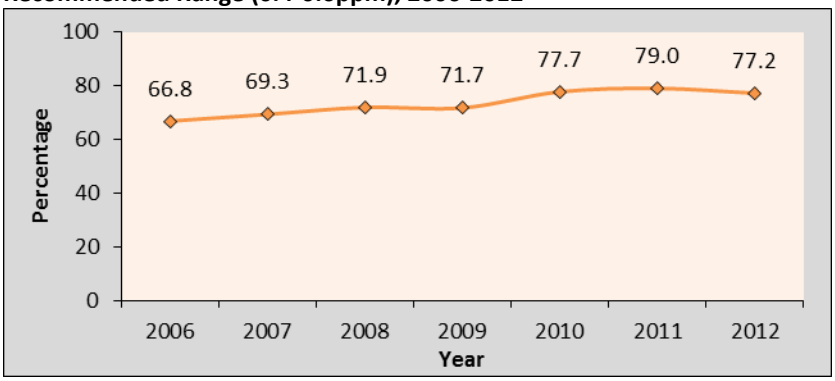
Source: Oral Health Division, 2012

1.3 Maintaining Fluoride Levels in Public Water Supply

Maintaining fluoride levels within the levels of 0.4 – 0.6 ppm is important to achieve maximum benefit for control and prevention of dental caries while minimising the risk of dental fluorosis.

In 2012, 77.2% of readings taken at reticulation points conformed to the recommended range. However, there was a slight drop in conformance of readings to the recommended range in 2012 compared with 2011 **(Figure 36)**.

Figure 36: Conformance of Fluoride Level in Public Water Supplies to the Recommended Range (0.4-0.6ppm), 2006-2012



Source: Oral Health Division, 2012

Eight out of 15 states - Perlis, Kedah, Penang, Perak, Selangor, FT Kuala Lumpur/Putrajaya, Negeri Sembilan and Johor - complied with the National Indicator Approach (NIA) standards for lower and upper limits of fluoride level in public water supplies (not more than 25% of readings below 0.4 ppm, and not more than 7% of readings exceeding 0.6 ppm).

Six states did not comply with the standard for lower limit of fluoride level (not more than 25% of the readings below 0.4 ppm) with Sabah not complying at all. Pahang did not comply to the upper limit of fluoride level in water (not more than 7% of the readings exceeding 0.6 ppm) **(Table 54).**

Table 54: **Fluoride Level at Reticulation Points by State, 2012**

States	Total Readings	Fluoride Readings					
		0.4 - 0.6 ppm		< 0.4 ppm (Std. < 25%)		> 0.6 ppm (Std. < 7%)	
		No.	%	No.	%	No.	%
Perlis	479	453	94.6	19	4.0	7	1.5
Kedah	1466	1386	94.5	60	4.1	20	1.4
Penang	408	350	85.8	47	11.5	11	2.7
Perak	2000	1910	95.5	87	4.4	3	0.2
Selangor	1209	1198	99.1	6	0.5	5	0.4
FTKL/ FT Putrajaya	1332	1272	95.5	25	1.9	35	2.6
N. Sembilan	952	922	96.8	26	2.7	4	0.4
Melaka	384	198	51.6	183	47.7	3	0.8
Johor	1464	1458	99.6	5	0.3	1	0.1
Pahang	1072	883	82.4	109	10.2	81	7.6
Terengganu	641	254	39.6	368	57.4	19	3.0
Kelantan	1462	100	6.8	1321	90.4	41	2.8
Sabah	132	0	0.0	132	100.0	0	0.0
FT Labuan	690	257	37.2	398	57.7	35	5.1
Sarawak	136	33	24.3	96	70.6	7	5.1
Malaysia	**13827**	**10674**	**77.2**	**2882**	**20.8**	**272**	**2.0**

Source: Oral Health Division (Quality Assurance Programme), MOH 2012
Note: There was no active fluoride feeder in Sabah for year 2012.

1.4 Annual Operating Budget

In Malaysia, WTPs are funded and run by the government or private sector. Government funds the government-operated WTP only. In 2012, the government spent more than RM 2 million for this programme **(Table 55).** Some government funds, however, were used to monitor fluoride levels at reticulation points in WTP operated by the private sector.

Table 55: Government Funded Fluoridation Programme by State, 2012

States	Annual Operating Budget		New Policy/ one-off Fund		Total Budget (RM)	Total Spent (RM)
	Amount Received (RM)	Amount Spent (RM)	Amount Received (RM)	Amount Spent (RM)		
Perlis	100,000.00	80,000.00	0	0	100,000.00	80,000.00
Pulau Pinang	575	575	0	0	575	575
Perak	580,000.00	579,934.75	0	0	580,000.00	579,934.75
Selangor	12,420.00	12,420.00	0	0	12,420.00	12,420.00
FTKL/ Putrajaya	15,065.00	15,065.00	0	0	15,065.00	15,065.00
Johor	15,156.00	15,156.00	0	0	15,156.00	15,156.00
Pahang	570,000.00	570,000.00	196,437.50	196,437.00	766,437.50	766,437.00
Sabah	0	0	200,000	196,437.00	200,000.00	196,437.00
FT Labuan	25,000.00	5,025.00	0	0	25,000.00	5,025.00
Sarawak	350,000.00	350,000.00	0	0	350,000.00	350,000.00
MALAYSIA	**1,668,216.00**	**1,628,175.75**	**396,437.50**	**196,437.00**	**2,064,653.50**	**2,021,049.75**

Source: Oral Health Division, 2012

1.5 Interagency Collaboration

The Oral Health Division 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 levels to strengthen multi-agency collaboration. Implementation issues were discussed and these included conformance of fluoride levels, and supplies and storage of fluoride compounds.

1.6 Training and Public Awareness

Recognising that knowledge and understanding of water fluoridation is crucial, annual training is conducted for health personnel and personnel from WTP. Overall, 46 training sessions were conducted in 2012, including hands-on training on the use of colorimeters.

2. PRIMARY PREVENTION & EARLY DETECTION OF ORAL PRE-CANCER & CANCER

Oral cancer remains a major health concern in Malaysia. The Oral Health Division emphasises collaborative efforts with community leaders, agricultural plantation authorities, and relevant agencies to ensure the success of the Primary Prevention & Early Detection of Oral Pre-Cancer & Cancer programme.

In 2012, 370 'high-risk' *kampung*/estates/communities were visited and 16,043 residents aged 20 years and above were screened for oral lesions. A total of 10,199 participants were given dental health education **(Table 56)**.

Table 56: Oral Cancer and Pre-cancer Screening and Prevention Programme, 2012

No. of estates/ villages visited		No. of patients screened	No. of Exhibitions held	Dental Health Education	
New	Repeat			No. of talks given	No. of participants
298	72	16, 043	342	890	10, 199

Source: Oral Health Division, 2012

Of the 16,043 patients seen, 29 with suspected lesions were referred to oral surgeons for further investigation and management **(Table 57)**.

Table 57: Participants Screened and Referred, 2007-2012

Year	No. Examined		Total Attendances	No. With Lesion		No. Referred	No. Seen by Surgeons	
	New	Repeat		n	%		n	%
2007	3,606	111	3,717	88	2.4	76	50	65.8
2008	4,745	133	4,878	113	2.3	68	48	69.6
2009	7,131	102	7,233	128	1.8	105	47	44.8
2010	5,680	133	5,813	36	0.6	17	8	47.1
2011	7,036	19	7,055	55	0.8	16	5	31.3
2012	15, 887	156	16,043	37	0.23	29	15	51.7

Source: Oral Health Division, 2012

From 2003 to 2012, 20% of malignant cases detected were stage 1 while about 64% were detected at later stages (Stages 3 & 4) **(Table 58)**. There is a need to improve patient's compliance to referral to prevent delayed treatment.

Table 58: Clinical and Histological Diagnosis of Referred Cases, 2003 – 2012

Year	No. of Cases Seen by Oral Surgeon	Clinical Diagnosis						Staging				Histological diagnosis								Lesion Status		
		Leukoplakia	Erythroplakia	Lichen Planus	Sub Mucous Fibrosis	Suspicious of oral cancer	Other Pathology	Stage 1	Stage 2	Stage 3	Stage 4	Hyperkeratosis	Epithelial Dysplasia	Carcinoma In-situ	Invasive Squamous Cell Carcinoma	Oral Lichen Planus	Oral Submucous Fibrosis	Other Malignancy	Benign Pathologies	Benign	Pre malignant	Malignant
2003	26	6	1	8	4	2	6	1	0	0	0	1	4	0	0	2	1	0	4	5	6	0
2004	19	3	1	3	1	2	10	0	0	3	0	0	0	0	3	0	0	0	0	0	1	2
2005	25	9	1	3	2	9	6	5	2	3	1	0	1	0	10	0	0	2	0	1	6	10
2006	34	1	1	6	1	18	7	7	1	5	7	0	0	0	17	3	0	1	4	3	2	19
2007	50	6	1	4	3	27	13	4	5	6	8	0	6	1	22	3	3	2	5	5	11	26
2008	48	2	1	0	1	35	7	4	2	8	13	0	5	2	20	8	0	2	2	3	6	32
2009	47	4	0	4	2	30	5	3	3	5	16	2	2	0	20	1	0	5	1	0	1	28
2010	8	1	0	2	0	1	4	0	0	1	0	0	2	0	1	0	0	0	0	0	3	1
2011	5	1	0	0	1	3	0	0	1	0	1	1	0	0	2	0	0	0	0	0	2	2
2012	16	3	2	1	2	6	2	0	0	0	2	0	0	0	2	0	0	1	3	4	2	4

Source: Oral Health Division, 2012

2.1 Mouth Cancer Awareness Week

At the national level, in collaboration with the Oral Cancer Research & Coordinating Centre, University of Malaya, the Mouth Cancer Awareness Week was launched on 18 November 2012 at Taman Tasik Shah Alam. A Walkathon, Oral Examination, Health Screening, Mini Games and Charity Sales Booth were held in conjunction with the launch **(Table 59)**.

Various activities were held by the states during the Mouth Cancer Awareness Week from 13-19 November 2012 aimed to increase oral cancer awareness among health professionals and the public. Activities included screening of 24,455 people, 463 awareness campaigns, 678 health education talks, 4 radio slots, and counselling of 6,113 individuals on risk habits.

Table 59: Activities during Mouth Cancer Awareness Week by State, 2012

State	Oral Screening	Oral Health Education			Oral Health promotion (No. of activities held)				*Advice/ Counselling
		Talks							
	Total Attendance	Group		Individual	Radio Talk	Television Talk	Exhibition/ Campaign	Others	No. of Participants
		No. Held	No. of Participants	No. Held					
F.T.K.L	3084	104	1334	0	0	0	14	70	1318
Perlis	170	0	0	0	0	0	5	1	70
Kedah	3169	53	1511	741	2	0	55	0	1439
Penang	1197	7	326	9	0	0	6	0	166
Perak	2831	93	1348	396	0	0	63	0	216
Selangor	1053	38	688	121	0	0	42	1	406
N Sembilan	1731	31	654	187	0	0	39	0	562
Melaka	597	7	99	69	0	0	22	0	131
Johor	350	9	117	126	0	0	6	0	0
Pahang	1731	58	587	505	0	0	64	0	579
Terengganu	1128	44	312	433	0	0	27	0	455
Kelantan	2154	51	819	274	0	0	33	0	246
Sabah	2356	43	1528	96	0	0	34	24	119
Sarawak	2590	136	1831	102	1	0	51	0	406
F.T. Labuan	34	4	41	0	1	0	2	0	0
CDC, DTCM**	280	0	0	0	0	0	1	0	0
OHD, MOH	0	0	0	0	0	0	0	1	0
Total	**24455**	**678**	**11195**	**3059**	**4**	**0**	**464**	**97**	**6113**

Source: Oral Health Division, 2012

* Example: Stop smoking habits / chewing betel quid / drinking alcohol / others

** Childrens' Dental Centre, Dental Training College, Malaysia

2.2 Training

In 2012, there were 20 training sessions on primary prevention and early detection of oral cancer conducted at state level involving 511 dental officers **(Table 60)**.

Table 60: Training Sessions for Oral Lesions by State, 2012

States	Oral Cancer Training	
	No. of courses conducted	No. of dental officers trained
Perlis	0	0
Kedah	0	0
Penang	6	101
Perak	2	69
F.T KL/F.T Putrajaya	0	0
Selangor	2	80
N. Sembilan	1	34
Melaka	1	20
Johor	1	22
Pahang	2	56
Terengganu	1	36
Kelantan	1	22
Pen. Malaysia	**17**	**440**
Sabah	2	39
Sarawak	1	32
F.T Labuan	0	0
Malaysia	**20**	**511**

Source: Oral Health Division, 2012

2.3 WHO-IAEA imPACT MISSION to Malaysia

In 2012, the imPACT Review Mission under the WHO-IAEA (World Health Organisation- International Atomic Energy Agency) Joint Programme on Cancer Control was held from 24-28 September 2012. It was conducted by a team of international experts in area of cancer control planning, prevention, early detection, diagnosis and treatment, cancer registration and palliative care. The objectives of the mission were:

- to carry out a comprehensive assessment of the country's cancer control capacity in area of cancer control planning, cancer information, prevention, early detection, diagnosis and treatment, palliative care, training and civil society activities.
- to carry out capacity and needs assessment for effective implementation of the country's radiation medicine programme as a component of a comprehensive National Cancer Control Programme (NCCP).

- to explore suitable project proposals and potential sources of funding for cancer control interventions.

The stakeholders are the Ministry of Health Malaysia; Hospital Umum Sarawak; Sarawak Oral Health Division; Sarawak Cancer Registry at Sarawak State Health Office; Singai Health Clinic, Bau, Kuching; Hospital Kuala Lumpur; Institute for Medical Research; Selayang Hospital; UKM Medical Centre; National Cancer Society Malaysia; Tung Shin Hospital; Hospis Malaysia; Hospital Putrajaya; Putrajaya Health Clinic; University of Malaya Medical Centre; National Cancer Registry, Disease Control Division; Sime Darby Medical Centre; Cancer Research Initiatives Foundation (CARIF); and Breast Cancer Welfare Association Mobile Outreach Programme (conducted in OYL Factory).

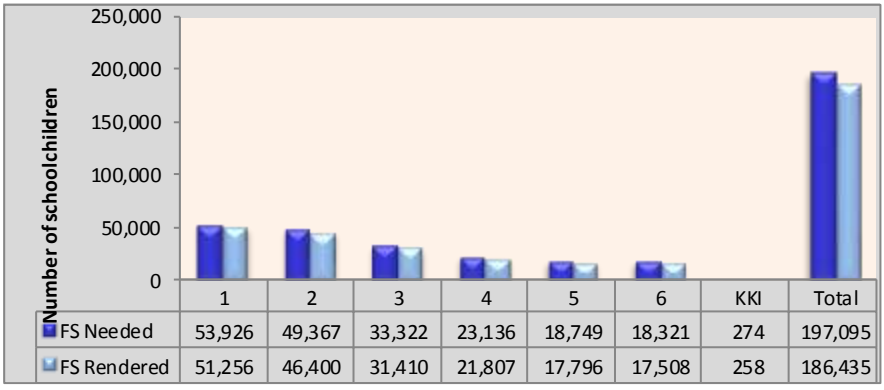
The team also visited the 'Redeems Community Centre, Singai, Bau and Kuching' to witness the oral health activities conducted at several stations. Data on exposure to oral carcinogens such as tobacco, alcohol and betel nut were collected under the oral cancer screening programme.

3. CLINICAL PREVENTION

3.1 Fissure Sealant Programme

About 94.6% of schoolchildren needing fissure sealants (FS) were rendered FS under the School-based Fissure Sealant Programme (**Figure 37).**

Figure 37: Treatment Need and Fissure Sealants Rendered, 2012

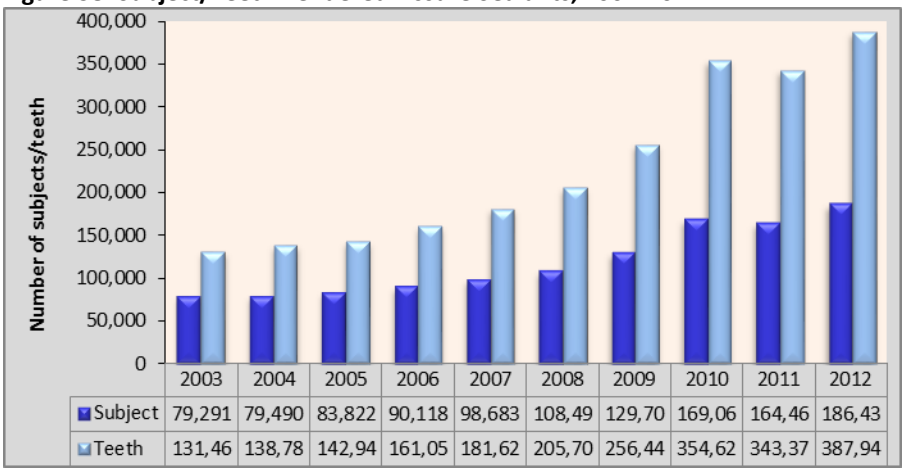


	1	2	3	4	5	6	KKI	Total
FS Needed	53,926	49,367	33,322	23,136	18,749	18,321	274	197,095
FS Rendered	51,256	46,400	31,410	21,807	17,796	17,508	258	186,435

Source: Oral Health Division, 2012
**KKI=kanak-kanak istimewa*

Overall, there are increasing subjects and teeth provided with FS from 2003 to 2012 (**Figure 38).**

Figure 38: Subject/Teeth Rendered Fissure Sealants, 2001-2012

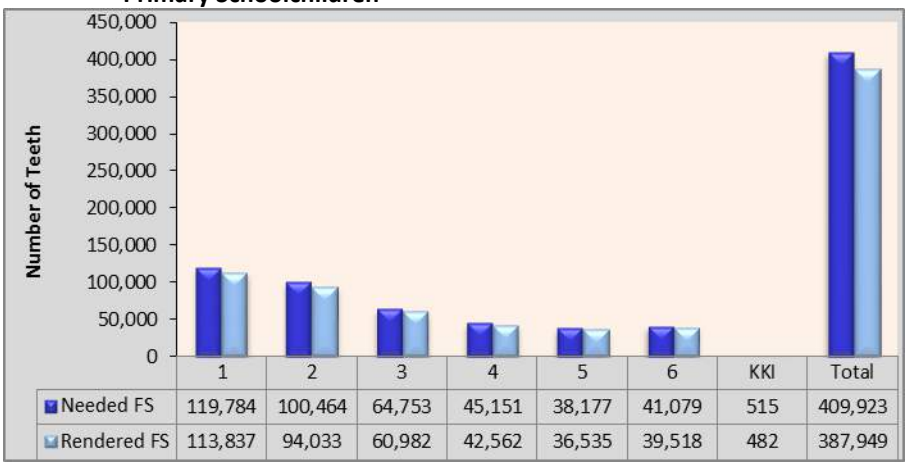


	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Subject	79,291	79,490	83,822	90,118	98,683	108,49	129,70	169,06	164,46	186,43
Teeth	131,46	138,78	142,94	161,05	181,62	205,70	256,44	354,62	343,37	387,94

Source: Oral Health Division, 2012

A total number of 409,923 teeth examined required FS. Of these, 94.6% were fissure-sealed and more than half were Year 1 and Year 2 primary schoolchildren (**Figure 39).**

Figure 39: Teeth Needed and Rendered Fissure Sealants among Year 1 to Year 6 Primary Schoolchildren



	1	2	3	4	5	6	KKI	Total
Needed FS	119,784	100,464	64,753	45,151	38,177	41,079	515	409,923
Rendered FS	113,837	94,033	60,982	42,562	36,535	39,518	482	387,949

Source: Oral Health Division, 2012
**KKI=kanak-kanak istimewa*

Over the last 5 years, the percentage of children in need of fissure sealant and those rendered fissure sealant have increased from 64.8% in year 2006 to 94.6% in 2012 (**Table 61**). The percentage of teeth in need of FS and rendered FS had increased from 82.0% in 2006 to 94.6% in 2012 and this is close to achieving the target i.e. 95% of schoolchildren in need receiving fissure sealants.

Table 61: Provision of Fissure Sealants, 2006-2012

Year	No. of Children			No. of Teeth		
	Needed FS	Rendered FS		Needed FS	Rendered FS	
	n	n	%	n	n	%
2006	138,996	90,118	64.8	196,335	161,052	82.0
2007	118,308	98,683	83.4	209,267	181,627	86.8
2008	122,638	108,496	88.5	226,223	205,702	90.9
2009	140,762	129,702	92.1	275,618	256,449	93.1
2010	183,142	169,065	92.3	391,115	354,625	90.7
2011	174,218	164,460	94.4	363,861	343,378	94.4
2012	197,095	186,435	94.6	409,923	387,949	94.6

Source: Oral Health Division, 2012

The trend of decayed teeth among selected Year 6 schoolchildren from 2003 until 2012 was also captured. The data show that 68.9 – 70.9% of caries experience was in posterior teeth, of which 61.5 – 63.9% involved only the occlusal surfaces (**Table 62**).

Table 62: Trend Data of Decayed Teeth among Year 6 Schoolchildren, 2003-2012

Year	Teeth with Caries Experience (* D + F)	Teeth with occlusal caries experience (D + F)				% Caries in Anterior Teeth	
		All type (** Class I and II)		Class I only			
	N	n1	%	n2	%	N-n1	%
2003	396,158	272,835	68.9	243,696	61.5	123,323	31.1
2004	436,840	288,382	66.0	255,270	58.4	148,458	34.0
2005	450,665	313,757	69.6	277,151	61.5	136,908	30.4
2006	455,964	323,174	70.9	291,583	63.9	132,790	29.1
2007	414,610	289,671	69.9	260,901	62.9	124,939	30.1
2008	430,798	292,397	67.9	256,954	59.6	138,401	32.1
2009	426,747	301,298	70.6	266,766	62.5	125,449	29.4
2010	409,324	287,626	70.3	258,963	63.3	121,698	29.7
2011	409,162	291,587	71.3	262,771	64.2	117,575	28.7
2012	441,440	297,460	70.9	284,107	63.9	143,980	32.6

Source: Oral Health Division, 2012

** 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. Hence, 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.

3.2 Fluoride Varnish Programme

To further strengthen the Early Childhood Oral Healthcare programme, fluoride varnish (FV) for toddlers was introduced and piloted in Sabah, Kelantan, and Terengganu in 2011. Sarawak started the pilot project in 2012. Additional funds were allocated for the purchase of fluoride varnish for the pilot. Data collection formats were further improved based on feedbacks from state coordinators. In 2012, a total of 14,961 'high risk' toddlers were rendered FV in Kelantan, Terengganu, Sabah and Sarawak **(Table 63).**

Table 63: Fluoride Varnish Application, 2012

State	Toddlers need FV			Toddlers rendered FV		
	2010	2011	2012	2010	2011	2012
Kelantan	3,324	4,337	5,530	850	1,490	1,845
Terengganu	-	5,991	7,504	-	5,446	6,795
Sabah	69	2,989	6,408	69	2,975	6,232
Sarawak	-	-	89	-	-	89
TOTAL	**3,393**	**13,317**	**19,531**	**919**	**9,911**	**14,961**

Source: Oral Health Division, 2012

Among those toddlers who were due for second applications, 26.8%, 25.3% and 7.1% in Kelantan, Terengganu and Sabah respectively received their second applications **(Table 64).**

Table 64: Number of Toddlers Received Second FV Application, 2012

State	Toddlers need FV	Toddlers rendered FV	Received second application (%)
Kelantan	5,530	1,845	494 (26.8)
Terengganu	7,504	6,795	1719 (25.3)
Sabah	6,408	6,232	444 (7.1)
Sarawak	89	89	0 (0)
Total	**19,531**	**14,961**	**2,657 (17.8)**

Source: Oral Health Division, 2012

3.3 School-Based Fluoride Mouth Rinsing Programme

School-based fluoride mouth rinsing (FMR) programmes have been carried out in Sabah, Sarawak and Kelantan. In 2012, the programme was conducted for

Year 2 to Year 6 children in selected schools in non-fluoridated areas in Kelantan, Sabah and Sarawak. In total, 83 schools and 29,677 students benefited from this programme **(Table 65).**

Table 65: Schools and Students Participating in FMR Programme, 2012

State	No. of schools participated			No. of student involved		
	2010	2011	2012	2010	2011	2012
Kelantan	7	7	7	1,204	723	765
Sabah	44	43	46	21,641	21,835	23,835
Sarawak	25	26	30	5,585	5,758	5,077
Total	**76**	**76**	**83**	**28,430**	**28,316**	**29,677**

Source: Oral Health Division, 2012

There was an increase in schools and schoolchildren involved in FMR programme in 2012. It is recommended that FMR Programme should be continued in communities with no water fluoridation programme with vigilant monitoring by oral health professionals.

QUALITY IMPROVEMENT INITIATIVES

The Quality Assurance Programme (QAP) is intended to improve the quality, efficiency and effectiveness of health services delivery, including oral healthcare delivery. QAP also facilitates the planned and systematic evaluation of the quality of services. The goal of QAP is to ensure that, within the constraints of the MOH available resources, patients, families and the community obtain the 'optimum achievable benefits' from services.

The National Indicator Approach (NIA) and the District and/or Hospital Specific Approaches (DSA/HSA) are used for the QAP in the MOH. These indicators are periodically reviewed to ensure their relevance and appropriateness.

1. NATIONAL INDICATOR APPROACH

There were five National Indicator Approach (NIA) Indicators to gauge performance of the oral health services in 2012. The standards for three of these indicators were raised in 2010 to reflect improving standards in quality of care rendered.

Four out of the five NIA Indicators achieved the set targets. Indicators 1 and 5 showed better achievements in 2012 compared with 2011. Indicator 2 still improved slightly in spite of the achievement being below the set standard (**Table 66**).

Table 66: Achievement of NIA indicators, 2011-2012

No	Indicator	Standard	Achievement	
			2011	2012
1	Percentage of primary schoolchildren maintaining orally-fit status	≥ 65%	66.3%	67.2%
2	Percentage of secondary schoolchildren maintaining orally-fit status	≥ 80%	77.4%	77.8%
3	Percentage of 16-year-old schoolchildren free from gingivitis	≥ 95%	96.0%	96.0%
4	Percentage of non-conformance of fluoride level at reticulation points (Level < 0.4ppm)	≤ 25%	18.2%	20.8%
5	Percentage of non-conformance of fluoride level at reticulation points (Level > 0.6ppm)	≤ 7%	2.8%	2.0%

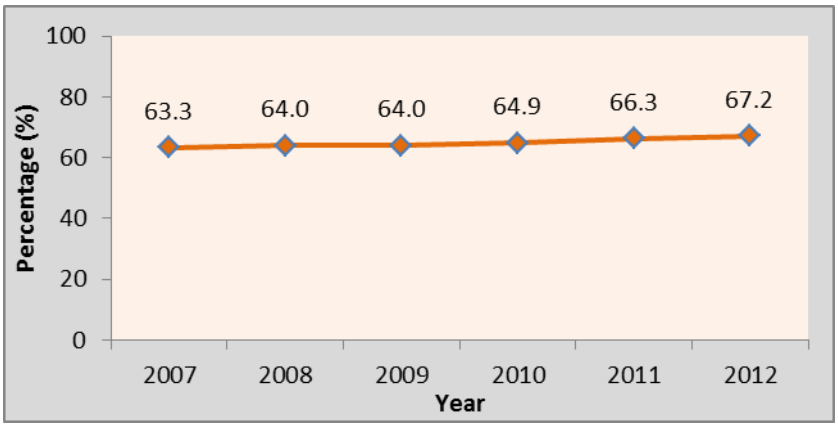
Source: Oral Health Division, MOH 2012

The standard for Indicator 3 has been achieved since 2009. Hence, this indicator is no longer monitored at the national level. However, states or

districts that have not achieved the national standard were recommended to adopt the indicator as a District Specific Approach (DSA).

Problem analysis was carried out by states that did not achieve set standards (shortfall in quality or SIQ) and remedial actions were identified and monitored. There has been steady improvement from 2007 to 2012 with performance improving from 63.3% in 2007 to 67.2% in 2012 **(Figure 40).**

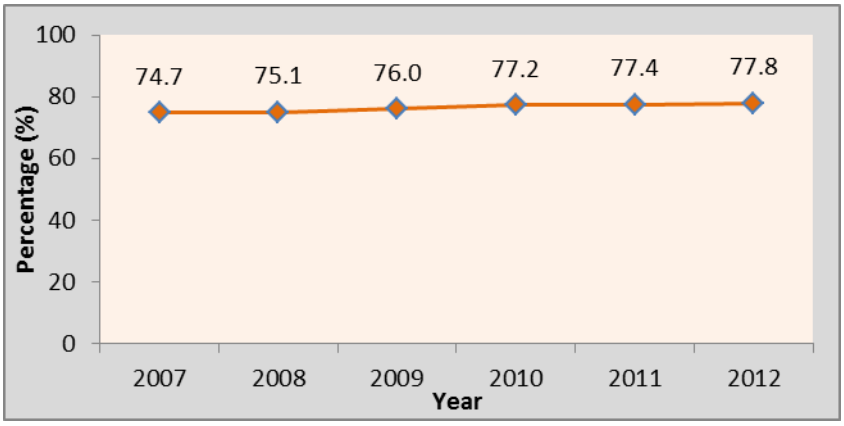
Figure 40: Percentage Primary Schoolchildren Maintaining Orally-fit Status, Standard ≥65%



Source: Oral Health Division, MOH 2012

There has been gradual improvement of secondary schoolchildren maintaining orally fit status from 74.7% in 2007 to 77.8% in 2012 **(Figure 41).**

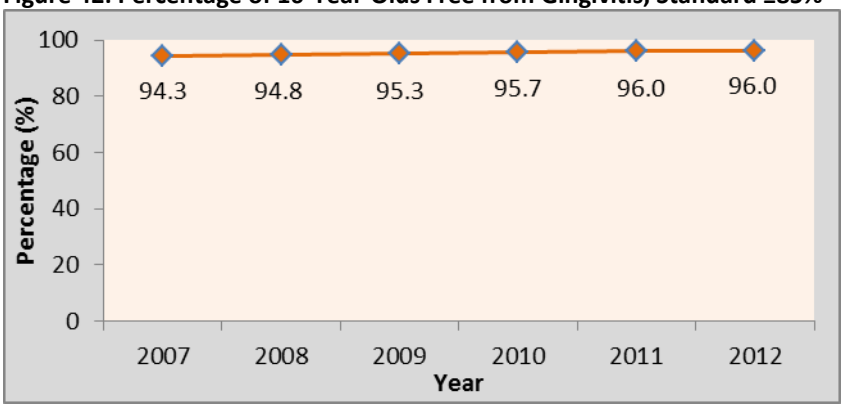
Figure 41: **Percentage of Secondary Schoolchildren Maintaining Orally Fit Status, Standard ≥80%**



Source: Oral Health Division, MOH 2012

Overall, there has been gradual improvement of 16-year-olds free from gingivitis from 94.3% in 2007 to 96.0% in year 2011 and 2012 **(Figure 42).**

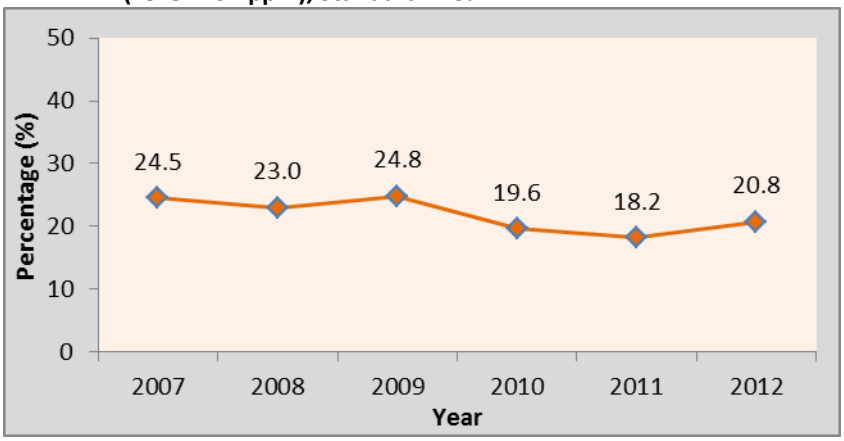
Figure 42: Percentage of 16-Year-Olds Free from Gingivitis, Standard ≥85%



Source: Oral Health Division, MOH 2012

The NIA indicator for non-conformance of fluoride levels (< 0.4ppm) has achieved the set standard. However, the achievement fluctuates between 24.5% (2007) to 20.8% (2012), the best being 18.2% in 2011 **(Figure 43).**

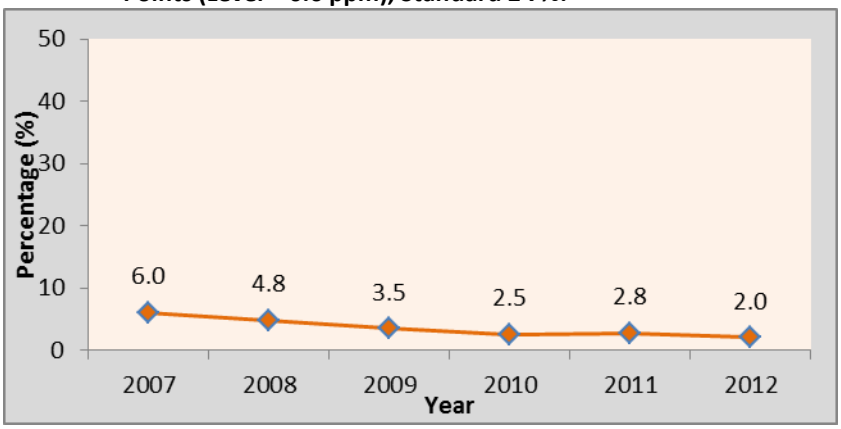
Figure 43: Percentage Non-Conformance of Fluoride Level at Reticulation Points (Level < 0.4ppm), Standard ≤25%



Source: Oral Health Division, MOH 2012

The indicator of percentage non-conformance of fluoride levels at reticulation points (> 0.6 ppm) has shown a slight decline from 2.8% in 2011 to 2.0% in 2012 **(Figure 44).**

Figure 44: Percentage of Non-Conformance of Optimal Fluoride Level at Reticulation Points (Level > 0.6 ppm), Standard ≤ 7%.



Source: Oral Health Division, MOH 2012

Note: In 2005, the fluoride level was changed from < 0.5ppm to < 0.4ppm and from > 0.7ppm to > 0.6ppm.

2. DISTRICT SPECIFIC APPROACH (DSA)

DSA indicators are developed and monitored at state level with specific DSA indicators for each affected district. However, Negeri Sembilan, Melaka, Pahang, Kelantan, Terengganu and Sarawak use the same indicator at state and district levels (State Specific Approach).

The DSA indicators pertaining to the ante-natal programme are the most commonly adopted indicators by all states except for Johor and Sarawak. Specific related indicators include rates of attendance; treatment and oral health education given to ante-natal mothers. Other common DSA indicators are related to oral health services for toddlers, pre-school, primary and secondary schoolchildren. Overall, DSA indicators relating to primary oral healthcare have improved.

DSA indicators unique to certain states include:

Selangor	• Incidence of needle stick injuries
	• Percentage of rejected x-rays
Terengganu	• Percentage of full dentures issued within two months
	• Percentage of redo x-rays

Similar to NIA, problem analysis was undertaken by the respective clinics and districts that did not achieve the standard. Remedial actions were identified and monitored. The Department of Paediatric Dentistry, Paediatric Institute,

Hospital Kuala Lumpur and the Childrens' Dental Centre and Dental Training College Malaysia also monitor DSA indicators specific to them.

Achievements in NIA and DSA are the result of strong co-operation, support and commitment from the oral heath personnel and related agencies. To sustain the current achievements and to enhance performance, oral health personnel need to continue to work closely with various stakeholders.

3. QUALITY ASSURANCE PROJECTS/STUDIES

Oral health personnel are actively involved in QA projects. In 2012, a total of 32 projects were completed and 52 projects continued into 2013. Johor had the highest number of completed QA projects (10) in 2012. Many dental projects have been presented at various conventions. Two projects had received awards at regional and state level **(Table 67).**

Table 67: Winners of QAP Project, 2012

State	Convention	Title
Perak	*Konvensyen Inovasi Zon Utara 2012*	To reduce the severity of periodontal disease among ante-natal mothers at *Klinik Pergigian Padang Rengas and Klinik Pergigian Sauk* (QA oral)
Johor	*Konvensyen Inovasi Jabatan Kesihatan Negeri Johor 2012*	Minimizing the percentage of untreated fractured crowns among cases seen by mobile dental team, Kulaijaya (QA poster)

Source: Oral Health Division, MOH 2012

4. MS ISO 9001: 2008

In 2012, Kedah converted from manual to interactive electronic Quality Management System (eQMS), making a total of 9 states using eQMS. Aside from the Oral Health Division MOH and Childrens' Dental Centre and Dental Training College Malaysia, Perlis, Pulau Pinang, Perak, Selangor, Federal Territory Kuala Lumpur, Negeri Sembilan, Melaka and Johor are on eQMS. The system is supported by a central server placed at the Information Management Division, MOH. The eQMS is continuously improved for function and user-friendliness. Meetings with the vendor and state representatives were held on 10 – 11 October 2012. The improvements made were:

- Email notification to document owner on approval of document (previously only to reviewer)

- Ease of generating and editing flowchart - new software
  - ✓ one step process software to create flow chart
  - ✓ able to edit existing flow chart (without creating new flow chart)
- Ease of editing procedure - 'Edit mode' button at each sub-heading of the procedure
- Add/remove row function at *tugas and tanggungjawab*
- Source container – able to store *arahan kerja, borang kualiti* and flow chart in the system.

Nationwide, 475 out of 568 dental clinics (83.6%) with dental officers posts have been ISO-certified **(Table 68).** Sarawak with 11 divisions is the only state that still maintains the original district certification approach.

Table 68: MS ISO 9001:2008 Certification Status by States, Districts and Facilities

State	Districts			Dental Clinic (DC) with Dental Officers' Post			Certification Period	Registration Number
	With ISO	Total	% ISO	With ISO	Total	% ISO		
MULTISITE CERTIFICATION								
Perlis	2	2	100	9	9	100	13.6.11-12.6.14	AR 3676
Kedah	11	11	100	40	53	75.5	8.8.11-7.8.14	AR 4665
P Pinang	5	5	100	23	28	82.1	30.10.12 - 29.10.15	AR 5028
Perak	10	10	100	54	54	100	26.10.10 - 9.10.13	AR 4449
WPKL	5	5	100	14	14	100	27.1.11 - 26.1.14	AR 3531
Selangor	9	9	100	41	61	67.2	27.1.11- 26.1.14	AR 3530
Negeri Sembilan	7	7	100	35	40	87.5	10.1.12 -16.1.15	AR 3889
Melaka	3	3	100	15	16	93.7	25.2.11 - 24.2.14	AR 3569
Johor	10	10	100	94	96	97.9	21.1.11 - 20.1.14	AR 5365
Pahang	11	11	100	34	41	82.9	2.5.12 - 20.3.15	AR 3949
Kelantan	10	10	100	36	51	70.5	28.4.12 -11.4.15	AR 3975
Terengganu	7	7	100	44	44	100	3.2.11- 2.2.15	AR 5591
Sabah	9	9	100	16	32	50.0	21.3.12 - 20.3.15	AR 3950
WP Labuan	1	1	100	1	1	100	10.3.10 -19.2.13	AR 3135
Total	**100**	**100**	**100**	**456**	**538**	**84.8**	-	-
DISTRICT CERTIFICATION								
Sarawak	9	11	81.8	19	30	63.3	Refer Table 70	
M'sia Multisite & District Certification	**109**	**111**	**98.2**	**475**	**568**	**83.6**	-	-

Source: Oral Health Division, MOH 2012

The status of districts in Sarawak is shown in **Table 69.**

Table 69: MS ISO 9001:2008 District Certification Status for Sarawak

District / Division	Location	Certification Period	Registration Number
Kuching	KP Jln Masjid KP Tanah Puteh KP Kota Sentosa KP Lundu	30.12.10 – 29.12.13	AR 3494
Kuching	KP Pakar, Hospital Umum Sarawak	11.11.11 - 4.11.13	AR 3436
Sri Aman	KP Sri Aman	14.10.10-01.04.13	AR 3175
Samarahan	KP Samarahan KP Serian KP Simunjan	8.4.12 – 15.12.14	AR 3858
Miri	KP Jalan Merbau KP Tudan	6.1.12 – 5.1.15	AR 3873
Sibu	KP Jalan Oya KP Lanang KP Kanowit	17.1.12-16.1.15	AR 3890
Sarikei	KP Sarikei KP Bintangor	12.4.12 – 11.4.15	AR 3976
Bintulu	KP Bintulu	23.11.10 – 11.11.13	AR 4474
Limbang	KP Limbang	22.10.11 – 22. 10.14	AR 4722
Mukah	KP Mukah	5.10.12 - 4.10.15	AR 5717
Kapit	-	-	-
Betong	-	-	-

Source: Oral Health Division, MOH 2012

Support in terms of technical advisors from among dental officers from the Oral Health Division MOH and the states have been given for external audits. In 2012, a total of 24 sites were audited for recertification and surveillance (**Table 70**).

Table 70: List of MS ISO Audit by Certification Body, 2012

No.	Place of Audit	Date	Type of Audit	Certification Body
1.	*Pejabat Pergigian Kuching*	9 -10 Jan 2012	Surveillance	SIRIM
2.	*JKN (Pergigian) Pahang*	7 - 10 Feb 2012	Surveillance	SIRIM
3.	*Pejabat Pergigian Labuan*	20 - 21 Feb 2012	Surveillance	SIRIM
4.	*Pejabat Pergigian Sarikei*	20 -22 Feb 2012	Recertification	SIRIM
5.	*JKN (Pergigian) Kelantan*	28 – 29 Feb 2012	Recertification	SIRIM
6.	*JKN (Pergigian) Perlis*	23 - 24 April 2012	Surveillance	SIRIM
7.	*Pejabat Pergigian Mukah*	20 - 22 June 2012	Compliance	SIRIM
8.	*JKN (Pergigian) Kedah*	16 - 18 July 2012	Recertification	SIRIM
9.	*JKN (Pergigian) Penang*	13 - 15 Aug 2012	Recertification	SIRIM
10.	*Pejabat Pergigian Bintulu*	10 - 13 Sept 2012	Surveillance	SIRIM
11.	*JKN (Pergigian) Perak*	24 - 26 Sept 2012	Surveillance	SIRIM
12.	*JKN (Pergigian) Terengganu*	15 -17 Oct 2012	Surveillance	SIRIM
13.	*JKN (Pergigian) Johor*	15 - 18 Oct 2012	Surveillance	SIRIM
14.	*PPKK & KLPM*	23 - 24 Oct 2012	Recertification	CI International
15.	*Pejabat Pergigian Labuan*	5 - 7 Nov 2012	Surveillance	SIRIM
16.	*JKN (Pergigian) Negeri Sembilan*	5 - 7 Nov 2012	Surveillance	SIRIM
17.	*Pejabat Pergigian Miri*	7 - 9 Nov 2012	Surveillance	SIRIM
18.	*Bahagian Kesihatan Pergigian, KKM*	19-20 Nov 2012	Recertification	CI International
19.	*JKN (Pergigian) WPKL &Putrajaya*	20 - 22 Nov 2012	Surveillance	SIRIM
20.	*Pejabat Pergigian Sibu*	26 - 28 Nov 2012	Surveillance	SIRIM
21.	*Pejabat Pergigian Sri Aman*	26 - 30 Nov 2012	Recertification	SIRIM
22.	*JKN (Pergigian) Melaka*	3 - 5 Dec 2012	Surveillance	SIRIM
23.	*JKN (Pergigian) Sabah*	3 - 6 Dec 2012	Recertification	SIRIM
24.	*JKN (Pergigian) Selangor*	5 -7 Dec 2012	Surveillance	SIRIM

Source: Oral Health Division, MOH 2012

5. OTHER QUALITY IMPROVEMENT ACTIVITIES

5.1 Innovation

Innovation is one of the quality initiatives actively carried out by oral health personnel. In 2012, 77 projects were completed and 22 projects will be continued into 2013. This was an increase in projects (57 completed and 13 to be continued) compared with 2011. Several dental projects received awards at state, regional and national level.

5.2 National Awards for Innovation 2012, MOH

The Oral Health Division is responsible for the conduct of the National Innovation Awards ceremony for the MOH. In 2012, this was held from 17-19 July 2012. The objectives are to recognise innovations by MOH personnel, inspire creativity and innovation in daily work, share the projects and improve services through adoption of such innovations.

The event was officiated by Dr. Khairiyah binti Abd Muttalib, the Principal Director for Oral Health, as Chairman for the National Innovation Awards Committee MOH. This is the first year where four categories - Product, Process, Service and Technology - competed for the awards. Fifty projects (28 Products, 8 Processes, 6 Services and 8 Technology) from various levels of MOH competed. The panel of judges were from the public and private sectors.

The nine dental projects were:

1. Miracle 6 - *Pejabat Kesihatan Pergigian Daerah Segamat, Johor*
2. Maxillo Extra Oral Tray - *Klinik Pakar Pergigian Hospital Umum, Sarawak*
3. *Penutup Kompressor Serbaguna - Klinik Pergigian Labuan, Labuan*
4. LMG Smart Kids Bestari - *Klinik Pergigian Jitra, Kedah*
5. Needle Grip Remover - *Pejabat Kesihatan Pergigian Kemaman, Terengganu*
6. South West Trimming Box - *Pejabat Pergigian Daerah Barat Daya, Pulau Pinang*
7. Bite Registration Tray - *Pejabat Kesihatan Pergigian Daerah Kuala Kangsar, Perak*
8. *Rak Impression Tray - Pejabat Kesihatan Pergigian Daerah Temerloh dan Bera*
9. *Teknik Penghasilan Prostesis yang Cekap, Tepat dan Selamat – Klinik Bedah Mulut, Hospital Sultanah Nur Zahirah, Terengganu*

Winners of the National Innovation Awards **(Table 71)** received certificates and cash prizes as follows:

First place	-	RM 5000.00
Second place	-	RM 3000.00
Third place	-	RM 2000.00

Prizes for the winners were presented by Datuk Kamarul Zaman bin Md Isa, Secretary General, MOH during *Hari Inovasi* on 19 November 2012.

Table 71: Winners of the National Innovation Awards

Position	Project	Organisation/State
Category - Product		
First	*Perangkap Lalat Kudat*	*Pejabat Kesihatan Kawasan Kudat, Sabah*
Second	*Beg Specimen Retrieval Untuk Laparoscopic Nephrectomy*	*Jabatan Urologi, Hospital Pulau Pinang*
Third	Maxillofacial Extra-Oral Tray	*Klinik Pakar Pergigian, Hospital Umum Sarawak*
Category - Process		
First	*Teknik Penghasilan Prostesis yang Cekap, Tepat dan Selamat*	*Jabatan Bedah Mulut, Hospital Sultanah Nur Zahirah, Terengganu*
Second	Innovative Transtibial Amputation Orthosis (ITAO)	*Unit Pemulihan Carakerja, Hospital Tunku Jaafar, Seremban Negeri Sembilan*
Third	Minute Block Appointment System (MBAS)	*Jabatan Pembedahan, Hospital Tengku Ampuan Afzan, Pahang*
Category - Service		
First	Physiotherapy One Stop Centre	*Jabatan Fisioterapi, Hospital Tengku Ampuan Afzan, Kuantan, Pahang*
Second	*Kerjasama Pintar Keselamatan Makanan BKKM-IPT-EKS*	*Bahagian Keselamatan dan Kualiti Makanan KKM, Putrajaya*
Third	*Bilik Bo-Bo-Bo*	*Unit Pemulihan Carakerja, Jabatan Rehabilitasi, Hospital Sultanah Bahiyah, Alor Setar*
Category - Technology		
First	GenSurg Online *(Sistem Rekod Maklumat Pesakit)*	*Jabatan Pembedahan, Hospital Pulau Pinang*
Second	*MyPhAStrack (Perekodan Sistem Temujanji Farmasi)*	*Klinik Kesihatan Jinjang, JK WPKL*
Third	*Sistem Maklumat Pengurusan Latihan*	*Kolej Pembantu Perubatan, Alor Star*

Source: Oral Health Division, MOH 2012

5.3 Innovative and Creative Circle (ICC)

In 2012, 16 ICC projects were completed and another 21 continued into 2013. Dental projects that won state and national level awards are shown in **Table 72**.

Table 72: Winners of the Innovative and Creative Circle Awards, 2012

Position	State	Convention	Project
First place	WPKL &Putrajaya	*Pertandingan KIK Peringkat Jabatan Kesihatan Wilayah Persekutuan Kuala Lumpur & Putrajaya 2012* (Technical category)	*Mempercepat Proses Penyediaan Peralatan Pelindungan Diri Pesakit Pada Hari Pesakit Luar*
Second place	Negeri Sembilan	*Pertandingan KIK Peringkat Kebangsaan KKM 2012* (Technical category)	*Alat Perangkap Amalgam Kristal*
Second place	Johor	*Konvensyen Inovasi Peringkat Jabatan Kesihatan Negeri Johor 2012* (Technical category)	*Kesukaran Dalam Proses Rendaman Gigi Palsu di Klinik Pergigian Batu Pahat*

Source: Oral Health Division, MOH 2012

5.4 Key Performance Indicators (KPI)

Nineteen KPIs were monitored by the Oral Health Programme in 2012. Four new KPIs were introduced while five were dropped.

All KPIs achieved the set targets for 2012, except for 3, which, however, achieved more than 90% of the target:

- Percentage of secondary school children rendered orally-fit (over new attendances) (93.3% versus target of 93.6%)
- Percentage of customers satisfied with services received (94.2% versus target of 95%)
- Percentage and number of dental clinics with MS ISO certification (83.6% versus target of 90%)

KPI 2c was chosen as the KPI for the Director-General of Health and also for the Health Minister **(Table 73)**.

Table 73: Key Performance Indicators 2012, Oral Health Programme, MOH

No	KPI	Target 2012	Achievement		
			2010	2011	2012
1.	Percentage of dental clinics with fulltime dental officer	70%	63.8%	69.5%	71.5%
2a.	Percentage of dental clinics with fulltime dental officer that provide daily outpatient service	75%	30.8%	69.2%	76.3%
2b	Percentage of dental clinics with fulltime dental officer that provide daily outpatient service inclusive of appointment days	75%		88.4%	95.7%
2c	Percentage of dental clinics with 2 or more fulltime dental officers that provide daily outpatient service	87% / 250 clinics	58.9%	74.5%	87.9%
2d	Percentage of dental clinics with 2 or more fulltime dental officers that provide daily outpatient service inclusive of appointment days	100%			100%
3.	Percentage of primary schools treated under incremental dental care	98.5%	98.3%	99.3%	99.4%
4.	Percentage of primary schoolchildren treated under incremental dental care	98.5%	98.0%	98.2%	98.5%
5.	Percentage of secondary schools treated under incremental dental care	90%	88.0%	89.2%	91.6%
6.	Percentage of secondary school children treated under incremental dental care	82%	80.5%	81.6%	84.0%
7a.	Percentage of primary schoolchildren rendered orally-fit (over new attendances)	97.4%	97.2%	97.3%	97.4%
7b.	Percentage of primary schoolchildren rendered orally-fit (over enrolment)	96%	95.2%	95.5%	95.9%

No	KPI	Target 2012	Achievement		
			2010	2011	2012
8a.	Percentage of secondary school children rendered orally-fit (over new attendances)	93.6%	92.8%	93.4%	93.3%
8b.	Percentage of secondary school children rendered orally-fit (over enrolment)	77%	74.7%	76.2%	78.4%
9.	Percentage of population receiving fluoridated public water supply	76.6%	76.0%	76.7%	77.7%
10.	Percentage of outpatients treated within 30 minutes by dental officer	≥ 78%	75.7%	77.6%	81.9%
11.	Percentage of appointments treated within 30 minutes by dental officer	≥87%	84.0%	86.2%	89.7%
12	Percentage of clinics with wait list for dentures exceeding 3 months	≤16%	16.8%	16.5%	9.7%
13.	Percentage of customers satisfied with services received	95%	95.0%	96.1%	94.2%
14.	Percentage of dental clinics with MS ISO certification	90%	85.7%	89.9%	83.6%

Source: Health Informatics Centre and Oral Health Division, 2012

5.5 Clients' Satisfaction Survey

Clients' Satisfaction Survey was carried out by dental clinics using a self-administered questionnaire from the Oral Health Division, MOH that measures patients' satisfaction. For 2012, the achievement was >90% in all states except Kelantan. Perlis scored the highest proportion on patient satisfaction (98.8%), followed by Johor (98.4%) and Selangor (95.4%). Overall, an average of 94.2% of patients expressed satisfaction with MOH dental clinics.

5.6 Clients Charter

There are two main areas for the Oral Health Programme Core Clients' Charter. It forms part of the KPI for the Secretary General of Health and is uploaded into the MOH website **(Table 74).**

Table 74: Key Performance Indicators 2012 Client's Charter, Oral Health Programme MOH

Core Client's Charter	Indicator	Target	Achievement
1. Taraf Perkhidmatan	*1. Pesakit luar dipanggil untuk rawatan oleh pegawai pergigian dalam tempoh 30 minit*	*78% pesakit*	*81.9 %*
2. Maklumat Perkhidmatan	*2a. Pesakit berpuas hati dengan perkhidmatan pergigian yang diberikan*	*90%*	*94.2%*
	2b. Sijil Pendaftaran Pegawai Pergigian disediakan dalam tempoh 14 hari bekerja dari tarikh permohonan lengkap beserta semua dokumen yang diperlukan diterima	*95%*	*100%*

Source: Oral Health Division, 2012

The Clients' Charter for the Oral Health Division, MOH is shown in **Table 75.** Quarterly, six-monthly and yearly reports were submitted to the Secretariat at the PharMareutical Services Division.

Table 75: Client's Charter for Oral Health Division

Client's Charter Indicator	Target	Achievement
1. Semua pelanggan dilayan oleh petugas kaunter dengan mesra	*80.0%*	*82.5%*
2. Semua pelanggan dilayan oleh petugas kaunter dengan cekap	*80.0%*	*89.5%*
3. Semua pelanggan diberi maklumat mengenai perkhidmatan yang disediakan	*80.0%*	*91.2%*
4. Semua pelanggan ada temujanji akan dapat berjumpa dengan pegawai berkenaan dalam 15 minit	*80.0%*	*81.4%*

Source: Oral Health Division, 2012

5.7 *Amalan* 5S

Amalan 5S was successfully implemented at the Oral Health Division MOH. MOH received certification from *Unit Pemodenan Tadbiran dan Perancangan Pengurusan Malaysia* (MAMPU) in June 2012. The certification is from 1 June 2012 to 1 June 2014.

5.8 Incident Reporting and Root Cause Analysis

In 2012, incident reporting and root cause analysis was introduced into the Oral Health Programme. Incident Reporting and Learning System is a 'No Blame, Reporting culture', an initiative to improve patient safety through:

a) learning from mistakes
b) advising others when a mishap occurs
c) sharing what have been learned when an investigation has been carried out

d) There are 10 mandatory incidents for medical and dental clinics which must be reported every quarter. The mandatory reportable incidents are:

- Incidents related to any clinical procedures in *"Klinik Kesihatan/Pergigian"*
- Malfunction/intentional or accidental misuse of equipment/incidents related to use of equipment that occur during treatment or diagnosis of patient
- Assault or battery of patients by employees and/or contractors (e.g. security personnel) including physical, mental or emotional abuse, mistreatment or harmful neglect of any patient
- Investigation error
- Diagnostic error
- Decision-making error
- Medication error resulting in serious adverse event / death
- Patient fall (while seeking treatment in *Klinik Kesihatan/Pergigian*)
- Patient death or serious disability due to electric shock which occurred while he/she was at the *Klinik Kesihatan/Pergigian*
- Fire in *Klinik Kesihatan/Pergigian* resulting in death or injury.

5.9 Star Rating System (SSR)

A committee for SSR was established at the Oral Health Division. Input from the Division covers the core functions – policy formulation, implementation, monitoring and evaluation of services. Various aspects of client management such as the clients' charter; management of complaints; customer satisfaction surveys and promotion activities are included. MOH Star Rating assessment was carried out on 12 June 2012. Two core programmes for SSR were school dental programme and water fluoridation programme. The MOH achieved five-star rating in 2012.

6. TRAINING

6.1 Quality Assurance

Training on quality-related initiatives was carried out by the Oral Health programme at state and district levels. Training was also carried out in

collaboration with State Health Departments and the Institute for Health System Research. In 2012, 34 courses related to QA were conducted involving 1,203 participants.

6.2 Corporate Culture

Activities and courses related to Corporate Culture were carried out in all states either by the oral health programme or in collaboration with the health departments/hospitals. In 2012, a total of 6,999 oral health personnel attended various courses on Corporate Culture conducted at state level. The number trained in 2012 was more than twice that for 2011 (3,434).

6.3 MS ISO

There is continuous update on knowledge and skills of personnel on MS ISO: 9001:2008. Every state conducted at least one training in ISO in 2012 (**Table 76).**

Table 76: MS ISO 9001:2008 Training, 2012

State	ISO Training
Perlis	• Effective Communication for Management and Internal Auditors • Basic of Data Management and Statistical Analysis
Kedah	• *Kursus* MS ISO 9001:2008
Pulau Pinang	• *Kursus Kawalan Dokumen MS ISO 9001:2008* • *Kursus Kesedaran MS ISO 9001:2008*
Perak	• *Kursus/taklimat MS ISO 9001:2008* • *Kursus Juruaudit Dalaman Sistem Pengurusan Kualiti MS ISO 9001:2008 dan* "Live Audit" • *Kursus Perincian Klausa Keperluan Sistem Pengurusan Kualiti MS ISO 9001:2008 untuk Juruaudit Dalaman*
Selangor	• *Audit Dalaman MS ISO 9001:2008*
WPKL	• Workshop on 'Writing of Non-conformity Report' • Workshop on 'Corrective and Preventive Action' • MS ISO ISO 9001:2008 Awareness
Negeri Sembilan	• Introduction to MS ISO 9001:2008 • *Audit Dalaman MS ISO 9001:2008* • *Kursus Praktikal Audit Dalaman MS ISO 9001:2008* • MS ISO ISO 9001:2008 Awareness
Melaka	• Workshop on eISO • Management Review Meeting • *Juruaudit Kualiti Dalaman*
Johor	• *Latihan Pengenalan dan Kalibrasi Audit Dalaman MS ISO 9001:2008*
Pahang	• Introduction to MS ISO 9001:2008
Terengganu	• Introduction to MS ISO 9001:2008
Kelantan	• Internal Audit

State	ISO Training
Sabah	• Introduction to MS ISO 9001:2008
Sarawak	• Workshop on Internal Audit • *Document Control Training*
Labuan	• *Kefahaman MS ISO 9001:2008* • *Juruaudit Dalaman MS ISO 9001:2008* • Workshop on Internal Audit
PPKK & KLPM	• *QMS Internal Auditing* • *Document Control Training* • *Correction & Corrective Action* • *ISO Training*
Oral Health Division, MOH	• *Internal Audit Training – national level* • *Process Mapping* • *ISO Awareness & eISO Interactive System*

Source: Oral Health Division, MOH 2012

ORAL HEALTH INFORMATION AND COMMUNICATION TECHNOLOGY

1. ORAL HEALTH CLINICAL INFORMATION SYSTEM

The Oral Health Clinical Information System (OHCIS) which has been implemented in 10 clinics in Johor and 1 in Selangor since 2009 is in the stabilisation and maintenance phase. OHCIS participated in the Innovation, Communication and Technology Award (AIICT) *(Anugerah Inovasi Pengurusan Teknologi Maklumat dan Komunikasi)* 2011 and successfully emerged among the top five finalists.

AIICT is one of the prestigious awards under the Public Sector Innovation Award that gives recognition to public sector agencies which have successfully leveraged on ICT to transform and add value to service delivery.

Prize giving ceremony *AIICT 2011.* Malacca, 31 October 2012.

A 3-day training session to improve and refresh the knowledge and skills of OHCIS users was conducted with the trainers and vendor of the system.

OHCIS training at Hotel Intekma Resort, Shah Alam, 20 & 21 November 2012. There were 48 participants consisting of Dental Officers, Dental Nurses, Dental Technologist and Dental Surgery Assistant from Selangor and Johor.

2. DENTAL PRACTITIONERS' INFORMATION MANAGEMENT SYSTEM

The Dental Practitioners' Information Management System (DPIMS) is an on-line database system for dental practitioners, and can be accessed at http://dpims.moh.gov.my/. This system had successfully incorporate the online payment transaction module using MyBayar as the result of the collaborative efforts of the Ministry of Health and the Malaysian Administrative Modernisation and Management Planning Unit (MAMPU).

DPIMS was also involved in the myHealth apps project which 'went-live' on 30 June 2012. This application allows users quick and easy access to healthcare information at anytime through their smart devices. the public would be able to access information on any active practitioner and their practising address.

3. ORAL HEALTH DIVISION WEBSITE

In 2012, the Oral Health Division (OHD) website contents and layout were revised. To ensure the web is more user friendly, several enhancements were made **(Table 77).**

Table 77: Enhancements of OHD website

Domain	Enhancements
Language	English and Malay language made available
Mobile Version	Website can be easily accessed via smart phone
Quick Links on the main page	Facilitate users to browse feedback form, MOH*Cube, HRMIS, MyCPD and OHD staff directory
Glossary	Added glossary
Menu	Menus and submenus were reconstructed with additions such as Management Profile, Career Frequently Asked Questions (FAQs), Oral Health FAQs & Publication
Web Personalization	The pages and information are tailored to the dental practitioner and public

Source: Oral Health Division, MOH 2012

Snapshot of the home page of the OHD website

With these improvements, information can be easily accessed and shared. For further details, visit http://ohd.moh.gov.my/v3/index.php/en/.

The OHD also monitors visitors to OHD website. Statistics from the StatCounter (a monitoring tool for web tracking) showed increasing number of visitors to the OHD website from 2009 to 2012 **(Table 78)**.

Table 78: Oral Health Division Website Statistics, 2007-2012

Year	Page Loads	Unique Visitors	First Time Visitors	Returning Visitors	Total Hits
2007	41,030	13,670	9,439	4,231	63,358
2008	81,900	30,587	22,883	7,704	126,251
2009	65,489	30,614	24,262	6,352	129,667
2010	73,076	32,973	25,862	7,111	134,851
2011	83,368	41,164	31,430	9,734	181,959
2012	178,046	36,232	NA	18,404	214,245

Source: Oral Health Division, MOH 2012

4. NATIONAL HEALTH DATA DICTIONARY (NHDD)

The Oral Health Division participated in the National Health Data Dictionary Workshop organised by the Health Informatics Centre at Ancasa Hotel & Spa, Kuala Lumpur from 18 – 20 September 2012. The objective of the workshop was to develop and endorse the data set components for general publication.

Besides Oral Health, there were 6 other working groups - Nuclear Medicine, Forensic Medicine, Radiotherapy & Oncology, Pharmacy, Mental Health & Psychiatric and Ear, Nose & Throat.

The Oral Health Working group comprised of Periodontist, an Orthodontist, a Dental Public Health Specialist and representatives from the Ministry of Defence (MINDEF) and MIMOS. The deliverables were standardised definitions and descriptions for 32 data elements and 124 look-up table records related to primary oral healthcare. The data elements and look-up tables are available in the Ministry of Health Website under NHDD Volume 2 in the Health Informatics Section.

5. TRAINING ON DATA COLLECTION

With the National Blue Ocean Strategies (NBOS), there has been an expansion in the scope of services and coverage to the population. A workshop on MSExcel to facilitate compilation of data on workload and coverage of services was conducted on 30 November 2012. The participants were from the Oral Health Division and from the pilot states of Perak and Melaka. The trainers were postagraduate students from the MPH (Oral Health) programme, University of Malaya.

Training on the oral health data collection format at Health Informatics Centre, 30 November 2012

6. eKL (Dental)

The eKL project was implemented under the Information Management Division (IMD) MOH since 2009 as part of the e-Government project to provide SMS appointments to patients in Klang Valley. Patients are notified through SMS on their mobile phones of their appointments and reminders are sent 2 days before the appointment day. Only 10 dental clinics in FT Kuala Lumpur are involved in this project. The system is now under stabilisation and maintenance phase. As this system only covers registration and appointment modules, there are plans to incorporate the OHCIS full version into eKL in the future.

Practice of Dentistry

Professional Dental Practice
Accreditation and Globalisation
Legislation and Enforcement

PROFESSIONAL DENTAL PRACTICE

1. RECOGNITION OF DENTAL QUALIFICATIONS

1.1 Recognition of Postgraduate Dental Qualifications

The Oral Health Division pursued recognition of various postgraduate qualifications in the MOH in 2012. These were recognised by the *Jawatankuasa Khas Perubatan (JKP),* MOH and subsequently by the Public Services Department (JPA) in 2012 (**Table 79).**

Table 79: Postgraduate Dental Qualifications Recognised in 2012

Recognition by ***Jawatankuasa Khas Perubatan***	**Recognition by** ***Jabatan Perkhidmatan Awam***
1. MRestorative Dent (Conservative), USM 2. MRestorative Dent (Prosthodontics), USM 3. MRestorative Dent (Periodontics), USM 4. MOral and Maxillofacial Surgery, USM 5. MPaediatric Dent, USM	1. MDent Sc (Paediatric Dent), University of Leeds, UK 2. Intercollegiate Diploma of Membership in Paediatric Dentistry, Royal Colleges of Surgeons and Physicians (Glasgow), Royal College of Surgeons (Edinburgh) and Royal College of Surgeon (England), UK 3. MSc (Forensics Odont), University of Melbourne, Australia (recognition awarded "Personal to Holder")

Source: Oral Health Division, MOH 2012

1.2 Recognition of Master of Community Oral Health & Doctorate of Dental Public Health, University of Malaya

Preparation for the recognition of this qualification was started in 2012. A meeting was held with representatives from University of Malaya (UM) on the 10 December 2012 to discuss the need for further information for presentation to the *Jawatankuasa Khas Perubatan*.

Requirements of the Malaysian Qualifications Agency (MQA) for the new Master of Community Oral Health (1 year) + Doctor in Dental Public Health University Malaya (3 years), must be complied with and approved by respective committees at the department, faculty and university level. The assessment and evaluation report is expected to be completed in April 2013. This proposal paper will be presented at two other meetings which are the *Jawatankuasa Induk Kurikulum (JKIK) Universiti Malaya* and *Jawatankuasa Swa-Akreditasi Universiti Malaya* in June 2013. It is envisaged that University Senate approval may be obtained by mid-2013.

2. GAZETTEMENT OF DENTAL SPECIALISTS

2.1 Gazettement of Dental Public Health Specialists

Guidelines for Gazettement of Dental Public Health Specialists (DPHS) in the MOH were presented to the Director General of Health on 31 December 2012. The document outlined the criteria, mechanism and pathway for professional gazettement of two groups of DPH officers (4-year-trained and less-than-4-year trained DPH postgraduates).

2.2 Gazettement of Clinical Dental Specialists

Eighteen clinical dental specialists were gazetted in 2012 **(Table 80).**

Table 80: Gazetted Clinical Dental Specialists, 2012

Discipline	Name	Grade	Gazettement Date
Oral & Maxillofacial Surgery	Dr Sathesh Balasundram	U52	15.11.2011
	Dr Dharmindra Rajah a/l Gunarajah	U48	13.12.2011
	Dr Nazer b Berahim	U48	06.01.2012
	Dr Aezy Noorazah binti Omar	U48	06.01.2012
Paediatric Dentistry	Dr Rusni binti Noordin	U54	17.7.2011
Periodontics	Dr Rusmizan b Yahya	U52	01.04.2012
Restorative Dentistry	Dr Nik Fareedah binti Mustafa	U52	06.01.2012
Orthodontics	Dr Evelyn Lee Gaik Lyn	U52	4.1.2012
	Dr Pretibha a/p Yugaraj	U54	22.11.2011
	Dr Suryati Hartini binti Mohamed Zini	U54	4.1.2012
	Dr Tan Ying Ying	U48	28.02.2012
	Dr Syiral Mastura binti Abdullah	U52	11.01.2012
	Dr Sharihan Binti Khasim	U54	11.01.2012
	Dr Asmak binti Shaari	U48	11.01.2012
	Dr Norhanizar binti Mansor	U48	09.07.2012
Special Needs Dentistry	Dr Norjehan Yahya	U52	04.07.2012
	Dr Siti Zaleha Hamzah	U52	12.07.2012
Forensic Dentistry	Dr Norhayati Jaafar	U54	24.11.2011

Source: Oral Health Division, MOH 2012

ACCREDITATION AND GLOBALISATION

1. ACCREDITATION OF DENTAL PROGRAMMES

1.1 Formulation of Guidelines of Reference for the Conduct of New Dental Programme

The draft 'Criteria and Standards for Accreditation of Operating Dental Auxiliary Degree Programmes' was prepared in 2012 and will be presented at the Joint Technical Meeting on Accreditation of Dental Programmes (JKTAP) in 2013.

1.2 Provisional Accreditation and Approval to Start New Dental Programme

Four applications were received from the Higher Education Providers (HEPs) to start new undergraduate dental degree programmes. The institutions were:

i) Cyberjaya University College of Medical Sciences (CUCMS), Bachelor of Dental Surgery (BDS) programme
ii) Vinayaka Missions International University College (VMIUC), Bachelor of Dental Surgery (BDS) programme
iii) Lincoln University College (LUC), Bachelor of Dental Surgery (BDS) programme
iv) Allianze University College of Medical Sciences (AUCMS), Doctor of Dental Surgery (DDS) programme

Preliminary evaluation of the HEPs database documents was conducted by appointed panel of assessors. There was a need for more information from the institutions. The accreditation process will continue in 2013.

1.3 Monitoring and Evaluation of Compliance of Dental Programmes to the Accreditation Standards

The 2nd surveillance accreditation visits was conducted for Melaka-Manipal Medical College (MMMC) for Bachelor of Dental Surgery (BDS) programme in collaboration with Manipal Academy of Higher Education (Deemed University India). Field evaluation visit planned in 2013.

1.4 Full Accreditation of Dental Programmes

Full accreditation visits were conducted for:

i) Universiti Sains Islam Malaysia (USIM) - Full accreditation was given by MQA for a period of 3 years (16 April 2012 -15 April 2015)

ii) International Islamic University of Malaysia (IIUM) - Full accreditation was given for a period of 3 years (16 April 2012-15 April 2015)
iii) MAHSA University College - Full accreditation was given for a period of 2 years (15 June 2012-14 June 2014).

1.5 Re-accreditation of Dental Programmes

Re-accreditation visits were conducted for:

- Universiti Kebangsaan Malaysia (UKM) - Re-accreditation was given for a period of 5 years from 6 December 2011- 5 December 2016

1.6 Meeting of the Joint Technical Accreditation Committee for Dental Programmes (JKTAP)

The JKTAP which consists of representatives from the Ministry of Health (MOH), the Malaysian Dental Council (MDC), the Deans of the Dental Faculties of the Public Institutions of Higher Learning, the Malaysian Qualifications Agency (MQA), the Ministry of Higher Education Malaysia (MOHE) and the Public Services Department (PSD) held regular meetings. In 2012, a total of six (6) meetings were held.

1.7 Accreditation Reports for Malaysian Dental Council Approval

Accreditation reports for six institutions presented at the MDC meetings were approved. The approved reports were as follows:

i) Universiti Sains Islam Malaysia (USIM) - Full Accreditation Evaluation visit report at MDC 98th meeting on 10 May 2012
ii) Universiti Islam Antarabangsa Malaysia (UIAM) - Full Accreditation Evaluation visit report at MDC 98th meeting on 10 May 2012
iii) Universiti Kebangsaan Malaysia (UKM) - Re-accreditation Evaluation visit report at MDC 99th meeting on 17 August 2012
iv) Lincoln University College (LUC) - Provisional Evaluation Visit report for course approval at MDC 99th meeting on 17 August 2012
v) MAHSA University College - Full Accreditation Evaluation visit report and application to increase intake from 50 to 75 students at MDC 99th meeting on 17 August 2012
vi) Penang International Dental College (PIDC) - evaluation visit report and application to increase intake from 75 to 100 students at MDC 99th meeting on 17 August 2012

1.8 Assessor Training for Dental Accreditation Programmes

A Seminar on Accreditation of Dental Programmes was held on 22 October 2012 at the Institute for Health Management, Ministry of Health Malaysia, Jalan Bangsar Kuala Lumpur. A total of 140 participants from MOH, Public and Private Higher Learning Institutions, Ministry of Defence and MDC attended the seminar.

1.9 Discipline-based Rating System – D'Setara

The Oral Health Division facilitated MQA in the collection of data for employers' satisfaction surveys for graduates 2010/2011 from UM, UKM, USM, UiTM and AIMST for the purpose of D'Setara. Data was collected and submitted to MQA on 7 May 2012.

2. POSTGRADUATE DENTAL PROGRAMMES

Officers of the OHD were also involved as panel in the initial discussions held by the *Bahagian Pendaftaran Piawaian, Jabatan Pengajian Tinggi* for the following post graduate programmes by PIDC:

i) Doctor of Clinical Dentistry (Periodontology) in collaboration with Vinnayaka Mission University
ii) Doctor of Clinical Dentistry (Prosthodontics)
iii) Doctor of Clinical Dentistry (Endodontology)
iv) Doctor of Clinical Dentistry (Paediatric Dentistry)
v) Doctor of Clinical Dentistry (Orthodontics).

3. DENTAL UNDERGRADUATE ATTACHMENT AT MOH

The Memorandum of Agreement (MoA) between MOH and SEGi University College and USM was finalised. The OHD also facilitated and monitored applications for undergraduate attachments for local public and private HEPs (IMU, MAHSA, PIDC, UKM USM UM, UiTM).

Elective postings for undergraduates from foreign universities were undertaken in 2012. This included students from University Al-Azhar, University of Ireland, University Sydney, University Tanta, University of Mansoura, Kings College London and University of Melbourne. Placement and monitoring of these students at the MOH facilities were made by state coordinators.

4. GLOBALISATION AND LIBERALISATION OF ORAL HEALTHCARE SERVICES

4.1 Participation in the Healthcare Services Sectoral Working Group (HSSWG) meeting for ASEAN Mutual Recognition Arrangement (MRA)

Three meetings were held in 2012 to discuss the implementation of the ASEAN Framework Agreement on Services (AFAS) specifically for dental specialist services.

- Healthcare Services Sectoral Working Group (HSSWG) and Asean Joint Coordinating Committee for Dental Practitioners (AJCCD) meeting on 13-15 March 2012 in Siem Reap, Cambodia
- HSSWG and AJCCD meeting on 4-5 May 2012 in Da Nang Vietnam
- HSSWG and AJCCD meeting on 26-28 September 2012 in Kuala Lumpur

The draft 'Roadmap for Implementation of the ASEAN MRA on Healthcare' was prepared.

4.2 Autonomous Liberalization

Members of the profession discussed implications of autonomous liberalisation for dental specialist services. Autonomous liberalisation allows foreign dental specialists with qualifications recognized by the Malaysian Dental Council to be employed in private hospitals. The government also allows for 100% foreign equity for stand-alone dental specialists clinics. In relation to this direction, there is a continuing need to review standards and criteria for dental specialist recognition under the impending National Specialist Register and also to relook at other domestic regulations pertaining to the matter.

LEGISLATION AND ENFORCEMENT

The Legislation and Enforcement Section has the responsibility of:

a) drafting laws and regulations pertaining to the practice of dentistry or matters relating to the practice of dentistry
b) giving input relating to the effect of other laws on the practice of dentistry
c) producing or reviewing guidelines for the use of dental practitioners
d) verifying applications and recommending private dental clinics for registration under the Private Healthcare Facilities and Services Act (Act 586)
e) ensuring that post-registration inspections of private dental clinics are carried out
f) coordinating the Occupational Safety and Health audits in MOH dental clinics
g) coordinating the activities and returns relating to patient safety and the Patient Safety Goals
h) ensuring that the provisions of the various Acts under the Ministry of Health Malaysia are adhered to by all dental practitioners and in all dental clinics
i) investigating into complaints against private dental clinics and dental practitioners, and
j) coordinating dental enforcement activities nationwide.

1. AMENDMENTS OF ACTS

1.1 The Proposed Dental Bill

The final draft Dental Bill was completed and presented to the Malaysian Dental Council at the 100th Meeting of the MDC on the 22 November 2012. The new Dental Regulations are being drafted.

1.2 Amendments to the Private Healthcare Facilities and Services Act 1998 and Regulations 2006

The Fee Schedule under the Private Healthcare Facilities and Services Act 1998 (PHFSA 98) was reviewed in 2012 and input sought from all specialist groups. The final draft of the dental procedures and the relevant fees was submitted to the Medical Practice Division for the amendment of the 13th Schedule of the Regulations. The amendment of the 7th Schedule of the Regulations relating to Registration of Private Medical and Dental Clinics will follow.

1.3 Review of the Position Statement on the Use of Dental Amalgam

The first edition Position Statement on the Use of Dental Amalgam endorsed by the Malaysian Dental Council (MDC) was distributed to all practitioners in 2002. With current research into use of amalgam and mercury and new dental materials available, the document was reviewed. A committee of 6 dental officers was formed and first met in in April 2011. The profession stand on the use and disposal of amalgam in dental clinics was updated.

The document was completed at the end of 2011, and endorsed by the MDC at its 100th Meeting on the 22 November 2012. It will be printed and distributed in 2013.

1.4 Standard Operating Procedures for the Disposal of Hypodermic Needles

Due to concerns on injuries from used hypodermic needles, the draft addendum to the Guidelines for Infection Control in Dental Practice on disposal of hypodermic needles was drafted in 2012. The addendum will serve as an advisory to all dental practitioners. Efforts continue into 2013.

2. REGISTRATION OF DENTAL CLINICS

The registration of private dental clinics began on 1 May 2006 with the highest number of applications in 2007 **(Table 81).** By 2012, a total of 1,779 private dental clinics had been registered.

Table 81: Number of Private Dental Clinics Approved for Registration, 2006-2012

Year	Private Dental Clinics Approved for Registration	Cumulative Number Registered
2006	131	131
2007	937	1068
2008	368	1436
2009	101	1537
2010	66	1603
2011	102	1705
2012	74	1779

Source: Oral Health Division, MOH 2012

By the end of 2012, due to cancellations of registration, the number of clinics found to be operating by the end of 2012 was 1,652. The average growth rate

was 6.3%. The highest growth rate was observed in Putrajaya (100%) followed by Melaka (20%), Sabah (14%) and Kedah (8%). There was no increase in the number of clinics in Sarawak, Perlis and FT Labuan (**Table 82**).

Table 82: Approved and Cancelled Registration of Private Dental Clinics, 2012

	State	Number of Dental Clinics					
		Operating on 31 Dec 2011	Approved in 2012	Cancelled in 2012	Increase in 2012	Percentage Increase (%)	Operating on 31 Dec 2012
1.	Selangor	436	36	5	31	7.1	467
2.	FT Kuala Lumpur	280	21	7	14	5.0	294
3.	Johor	164	18	6	12	7.3	176
4.	Pulau Pinang	112	8	0	8	7.1	120
5.	Perak	113	3	2	1	0.9	114
6.	Sabah	86	16	4	12	14.0	98
7.	Sarawak	83	2	2	0	-	83
8.	Kelantan	53	5	3	2	3.8	55
9.	Kedah	50	5	1	4	8.0	54
10.	Negeri Sembilan	48	3	1	2	4.2	50
11.	Pahang	46	3	2	1	2.2	47
12.	Terengganu	39	3	0	3	7.7	42
13.	Melaka	35	10	3	7	20.0	42
14.	Perlis	4	0	0	0	-	4
15.	FT Labuan	4	0	0	0	-	4
16.	FT Putrajaya	1	1	-	1	100	2
	Total	**1,554**	**74**	**25**	**98**	**6.3**	**1652**

Source: Oral Health Division, MOH 2012

Almost half (46.1%) of the private clinics are in located in Selangor and FT Kuala Lumpur. In addition with those in Johor and Pulau Pinang, it account for nearly two thirds (64%) of the total amount of dental clinics.Thus, these four states are having the lowest private clinic to population ratio below 20,000 **(Table 83).**

Table 83: Data on Registered Clinics in Relation to Population, 2012

State	Registered Clinics			Clinic to Population Ratio
	No.	%	Cumulative %	
Selangor	467	28.3	28.3	1: 12,100
WP KL	294	17.8	46.1	1: 5,828
Johor	176	10.7	56.7	1: 19,543
P Pinang	120	7.3	64.0	1: 13,426
Perak	114	6.9	70.9	1: 21,199
Sabah	98	5.9	76.8	1: 34,405
Sarawak	83	5.0	81.8	1: 30,672
Kelantan	55	3.3	85.2	1: 29,825
Kedah	54	3.3	88.5	1: 36,978
N Sembilan	50	3.0	91.5	1: 21,126
Pahang	47	2.8	94.3	1: 32,945
Melaka	42	2.5	96.8	1: 20,060
Terengganu	42	2.5	99.4	1: 26,021
Perlis	4	0.2	99.6	1: 59,850
WP Labuan	4	0.2	99.9	1: 22,900
WP Putrajaya	2	0.1	100	1: 39,700
Total	**1652**	100		1: 17,758

Source: Oral Health Division, MOH 2012

2.1 Enforcement Officers

In 2012, there were 36 enforcement officers in the states and three at the Oral Health Division, Ministry of Health Malaysia.

Perlis	1.	Dr Rohana binti Mat Arip
	2.	Dr Izuan b Abdul Hamid
Kedah	3.	Dr Hjh. Farehah binti Othman
	4.	Dr Ahmad Fadhil b Mohamad Shahidi
Pulau Pinang	5.	Dr Asnil b Md Zain
	6.	Dr Muhammad Azhan b Ismail
Perak	7.	Dr Faryna binti Mohd Yaakob
	8.	Dr Nur Azlina binti Omar
Selangor	9.	Dr Amdah binti Mat

	10.	Dr Nor Haslina binti Mohd Hashim
	11.	Dr Kamariah binti Omar
	12.	Dr Siti Kamilah binti Mohamad Kasim
FT KL & Putrajaya	13.	Dr Shahrol Lail b Sujak
	14.	Dr Vijayamanohar a/l Kanagalingam
	15.	Dr Fiesol Abdul Rahman
Negeri Sembilan	16.	Dr Harlina binti Ali Hanafiah
	17.	Dr Rosnah binti Atan
Melaka	18.	Dr Khadijah binti Wahab
	19.	Dr Nor Azlida binti Abu Bakar
Johor	20.	Dr Sheila Rani a/p Ramalingam
	21.	Dr Sabarina binti Omar
	22.	Dr Sabrina Julia binti Mohd Jeffry
Pahang	23.	Dr Noor Azizan binti Mohd Ghazali
	24.	Dr Ester Pricilla
	25.	Dr Ismazura binti Ismail
Terengganu	26.	Dr Marsita Hasniza binti Mohamad
	27.	Dr Nor Azura binti Juhari
Kelantan	28.	Dr Ahmad Barhanudin b Muhamed
	29.	Dr Azuar Zuriati binti Ab Aziz
Sabah	30.	Dr Norinah Mustafa
	31.	Dr Chung Ken Tet
	32.	Dr Rokiah binti Aziz
Sarawak	33.	Dr Thaddius Herman anak Maling
	34.	Dr Roslina binti Mohd Fadzillah Mah
	35.	Dr Abdul Rahim b Rosli
FT Labuan	36.	Dr Nors'adah binti Abdul Aziz
OHD	37.	Dr Elise Monerasinghe
	38.	Dr Haznita binti Zainal Abidin
	39.	Dr Mustaffa b Jaapar

Every state had at least 2 enforcement officers in 2012 except for FT Labuan. This is to ensure the smooth implementation of the PHFSA 1998 and to handle complaints made against registered and illegal clinics. The ratio of state enforcement officer to private clinics is listed in **Table 84.** While the number of clinics is important in determining the workload of the enforcement officers,

the size of the state also has a bearing on the number of officers needed. Selangor and FT Kuala Lumpur need more enforcement officers.

Table 84: Enforcement Officers in Relation to Number of Private Clinics

State	No of Enforcement Officers	No. of dental Clinics	No. of New dental clinics	Enforcement Officer to dental Clinic Ratio
Selangor	4	467	36	1: 114
FTKL & Putrajaya	3	296	22	1: 99
Johor	3	176	18	1: 59
P Pinang	2	120	8	1: 60
Perak	2	114	3	1: 57
Sabah	3	98	16	1: 33
Sarawak	3	83	2	1: 28
Kelantan	2	55	5	1: 28
Kedah	2	54	5	1: 27
N Sembilan	2	50	3	1: 25
Pahang	3	47	3	1: 16
Melaka	2	42	3	1: 21
Terengganu	2	42	10	1: 21
Perlis	2	4	0	1: 2
FT Labuan	1	4	0	1: 2
Total	**36**	**1652**	**74**	1: 46

Source: Oral Health Division, MOH 2012

2.2 Inspection on registered private Dental Clinics

In 2012, inspections on registered private dental clinics were carried out. These included the usual pre and post-registration inspection and surveillance inspections to ensure compliance to structural and physical requirements. Monitoring inspections on registered dental clinics were conducted to ensure that standards were maintained and infection control guidelines adhered to **(Table 85).**

Table 85: Number of Inspections of dental clinic by state, 2012

State	No. of Clinics	Inspections			
		Pre-Registration	Post-Registration	Monitoring	
				No.	%
Perlis	4	0	1	3	75.0
Kedah	54	5	3	49	90.7
Pulau Pinang	120	8	4	20	16.7
Perak	114	3	4	30	26.3
Selangor	467	20	27	102	21.8
FT Kuala Lumpur	294	16	16	65	22.1
FT Putrajaya	2	0	0	0	0
Negeri Sembilan	50	2	1	46	92.0
Melaka	42	5	5	36	85.7
Johor	176	13	11	92	52.3
Pahang	47	2	4	40	85.1
Terengganu	42	2	1	37	88.1
Kelantan	55	2	2	41	74.5
Sabah	98	12	8	23	23.5
Sarawak	83	2	2	29	34.9
FT Labuan	4	0	0	4	100
Total	**1652**	**92**	**89**	**617**	**37.3**

Source: Oral Health Division, MOH 2012

2.3 Complaints on Private Dental Clinics

Complaints made against private dental clinics are handled under the PHFSA 98. The number of complaints received in 2012 is shown in **Table 86.**

Table 86: Complaints and Enforcement Activities, 2012

State	No. of Clinics	No. of Complaints Received	No. of Enforcement Activities	No. of Complaints Settled
Perlis	4	1	1	1
Kedah	54	2	6	2
Pulau Pinang	120	2	2	1
Perak	114	1	1	1
Selangor	467	10	22	10
FT Kuala Lumpur	294	13	11	7
FT Putrajaya	2	0	0	0
Negeri Sembilan	50	1	3	1
Melaka	42	0	0	0
Johor	176	6	9	6
Pahang	47	2	2	2
Terengganu	42	0	0	0
Kelantan	55	0	0	0
Sabah	98	1	0	1
Sarawak	83	1	1	1
WP Labuan	4	0	0	0
Total for 2012	**1652**	**40**	**58**	**11**
Total for 2011	**1547**	**86**	**64**	**34**
Total for 2010	**1505**	**23**	**36**	**15**
Total for 2009	**1179**	**29**	**27**	**29**

Source: Oral Health Division, MOH 2012

Enforcement activities were carried out to ensure compliance to legislation and guidelines, and against illegal practices. The highest number of enforcement activities was carried out in Selangor followed by Federal Territory of Kuala Lumpur and Johor. The highest number of complaints was in Federal Territory of Kuala Lumpur (32.5%) followed by Selangor (25%) and Johor (15%).

2.4 Enforcement Courses

There were various courses organised by the Private Medical Practice Control Division (CKAPS), the Oral Health Division and the various State Private Medical Practice Control Units (UKAPS). These courses were aimed at updating knowledge, reinforcing procedures and guidelines and improving skills in surveillance and enforcement activities of the enforcement officers (**Table 87).**

Table 87: Courses at National and State Level, 2012

Title of Course	Date	Organizer	No. of Officers
NATIONAL LEVEL			
1. Kursus Penguatkuasaan Dan Penyediaan Kertas Siasatan	10 – 13 Jan 2012	OHD, KKM	32
2. Training of Trainers on Safety and Health in Dental Practice	10 – 12 July 2012	OHD, KKM	10
3. Medicine & Law: The Necessities, Conflicts and Liabilities	7-8 Nov 2012	Crimson Logic Malaysia Sdn Bhd	8
4. Training Course for Medical Experts	14 Jul 2012	Academy of Medicine Malaysia	4
5. Kursus Pendakwaan Lanjutan Bagi Pegawai Penguatkuasa (KKM)	2-6 April 2012	OHD, KKM ILKAP	21
6. Seminar on Future Legislation in Dentistry	5-6 Nov 2012	Malaysian Dental Council	5
7. Kursus Pengukuhan Penyiasatan Dan Pendakwaan	27 Jun - 1 Jul 2012	*ILKAP*	4
8. Kursus Gubalan Undang – Undang Lanjutan Di Peringkat Kementerian Kesihatan Malaysia	4 – 5 Dec 2012	*CKAPS*	2
9. Kursus Pemeriksaan Premis Pengamal Pergigian Swasta	9-11 April 2012	OHD, KKM	1
STATE LEVEL			
1. Kursus Pemantapan Penguatkuasaan Keselamatan Dan Kesihatan Pekerjaan	*18 Sept 2012*	*JKN Selangor*	*6*
2. Bengkel Penguatkuasaan Dan Serbuan	*16-17 Jan 2012*	*UKAPS Melaka*	*1*
3. Kursus Integriti Dan Jatidiri Anggota Penguatkuasa UKAPS Siri5	*16-19 Jul 2012*	*UKAPS Johor*	*1*
4. Kursus Pembacaan Akta 586 & Peraturan-Peraturannya	*14-17 Sept 2012*	*CKAPS UKAPS Melaka*	*5*
5. Kursus Pengendalian Aduan Siri 1/2012	*10-12 Okt 2012*	*CKAPS UKAPS Pahang*	*4*
6. Kursus Pengendalian Aduan Siri 3/2012	*18-21 Nov 2012*	*CKAPS UKAPS N.Sembilan*	*4*
7. Seminar Metodologi Penyelidikan	*3-4 Dis 2012*	*IPK & UKAPS P.Pinang*	*2*

Source: Oral Health Division, MOH 2012

CHALLENGES AND FUTURE DIRECTIONS

ISSUES OF HUMAN RESOURCE

In year 2012, the Oral Health Division contended with the influx of a large number of dental graduates into the MOH. A total of 514 entered the service, the largest number thus far in the history of the MOH. The number is expected to rise in 2013 with more institutions of higher learning having graduate outputs. Without an appreciable increase in infrastructure or equipment, greater numbers of new graduates strain the MOH capacity to provide training ground for new dental officers. This mismatch between professional numbers and facilities does not translate into better access to oral healthcare for the public. Hence, the programme looks to justify for more mobile teams and mobile clinics.

With rising dental officer numbers, the programme now faces an acute shortage of Dental Surgery Assistants. The sudden need to outfit and render services at Urban and Rural Transformation Centres further strains the imbalance.

There is also a need to look into the career pathways for oral health personnel at all levels. The programme hopes the much awaited human resource projection review in 2012 will yield results to be taken to the stakeholders in 2013. A Seminar is projected for 2013 to provide guidance to ensure a good balance and mix of personnel to serve the population.

ENGAGING AND EMPOWERING THE POPULATION

There is still much to do in terms of engaging the public on prevention to allay future dental problems. The Division will continue to strengthen oral health promotion and prevention efforts to control oral diseases. Efforts will be geared towards multisectorial approaches in oral health promotion activities aimed to increase community participation towards self care.

The Oral Health Division also undertakes the responsibility to provide access to adequate oral healthcare, especially to the underserved populations. The Programme plans for more outreach services for such populations. Reviews of policies, guidelines and monitoring of outcomes are conducted to ensure the delivery of quality care.

MAJOR EVENTS 2012

DATE	EVENTS
14-15 Jan	*19th FDI/MDA Scientific Convention and Trade Exhibition*
13-14 Feb	*Mesyuarat JDPKP 1/2012*
16 Feb	*Mesyuarat Kaukus Dekan*
20 Feb	*Mesyuarat Jawatankuasa Teknikal Akreditasi Pergigian Bil 1/2012*
23-24 Feb	*Mesyuarat Pakar Pergigian Kesihatan Awam 1/2012*
24 Feb – 1 Mar	*Perundingan* Prof. Helen Whelton - Training and Calibration for Enamel Opacities Indices
25 Feb	MADPHS Conference and AGM
29 Feb	*Mesyuarat Majlis Pergigian Malaysia Bil 97*
5 Mar	*Mesyuarat Kumpulan Kerja Pembangunan Protokol Kajian* Enamel Opacities
7 Mar	*Mesyuarat JK Kerja Kaji Semula Garis Panduan* School-based Fissure Sealant Programme 1/2012
8 Mar	*Mesyuarat JK Kerja Kaji Semula Dokumen* Implementation of Water Fluoridation Programme in Malaysia 1/2012
16 Mar	*Mesyuarat JK Penempatan & Pertukaran Pegawai Pergigian*
24 Mar	MAOMS Conference
21 Mar	*Mesyuarat JK Pemandu Perkhidmatan Sokongan Operasi dan Penyenggaraan OHCIS & eKL (Pergigian) Bil 1/2012*
26-27 Mar	*Mesyuarat Pakar Bedah Mulut & Pakar Patologi/Perubatan Mulut 1/2012*
4 Apr	*Mesyuarat* CPG : Management of chronic periodontitis (2nd edition)
16 Apr	*Mesyuarat Jawatankuasa Teknikal Akreditasi Bil. 2/2012*
12-13 April	*Mesyuarat Pakar Ortodontik*
14-16 April	18th MAO International Scientific Conference and Trade Exhibition
20-22 April	IDEM 2012
25-27 April	*Bengkel NHMS 2011 Bahagian 2: Kajian* Health Care Demand Analysis
23-24 April	*Mesyuarat JDPKP 2/2012*
30 April	*Bengkel NHMS 2011 Bahagian 3: Kajian Health Care Demand Analysis*
2-3 May	*Bengkel NHMS 2011 Bahagian 3: Kajian Health Care Demand Analysis*
2-4 May	*Mesyuarat Pakar Periodontik 1/2012*
8-9 May	*Mesyuarat Pakar Pergigian Restoratif 1/2012*
10 May	*Mesyuarat Majlis Pergigian Malaysia Bil 98*
10 May	*Mesyuarat* CPG : Management of severe early childhood caries (2nd edition)
14-15 May	*Mesyuarat Pakar Pergigian Pediatrik 1/2012*
21 May	*Mesyuarat* CPG : Antibiotic prophylaxis against wound infection for oral surgical procedures (2nd edition)
22-24 May	*Bengkel Pengurusan Kewangan Kajian Sistem Kesihatan Malaysia*

DATE	EVENTS
24 May	*Pelancaran Klinik Pergigian Bergerak 1Malaysia*
24-28 May	2012 Commonwealth Dental Association/MDA Joint International Scientific Convention & Trade Exhibition CUM 69th MDA AGM
4 Jun	*Mesyuarat* Global School Health Survey (Malaysia)
7 Jun	*Mesyuarat JK Pemandu Perkhidmatan Sokongan Operasi dan Penyenggaraan OHCIS & eKL(Pergigian) Bil 2/2012*
12 Jun	*Mesyuarat JK Penempatan & Pertukaran Pegawai Pergigian*
11-13 Jun	*Bengkel Pemantapan Pengurusan Kewangan Berasaskan Indeks Akauntabiliti bagi Pegawai Pergigian Deerah, KKM*
12-14 Jun	15th National Institutes of Health (NIH) Scientific Meeting
15 Jun	*Mesyuarat Jawatankuasa Teknikal Akreditasi Bil. 3/2012*
25 Jun	*Mesyuarat* CPG : Management of developmentally missing incisors (2nd edition)
25-26 Jun	*Mesyuarat JDPKP 3/2012*
26 Jun	*Mesyuarat* Quick Reference & Patient Information leaflet bagi CPG Management of avulsed permanent anterior teeth in children *KKM bil 1/2012*
28 Jun	Courtesy call to the Dental Director of Armed Forces Dental Corps of the Ministry of Defence, Major-General Dato' Dr. Shukri Hussin and visit to *Pusat Pergigian Angkatan Tentera Malaysia*
27-29 Jun	*Kursus Audit Dalaman MS ISO 9001:2008*
9-11 Jul	*Kursus* Developing Effective Oral Health Promotion Materials
12 Jul	*Mesyuarat* CPG : management of ameloblastoma
11-12 Jul	*Latihan muatnaik dokumentasi sistem interaktif ISO*
17 Jul	*Mesyuarat* CPG : management of chronic periodontitis (2nd edition)
17-19 Jul	*Anugerah Inovasi Peringkat Kebangsaan 2012 KKM (Kategori Produk)*
18 Jul	*Mesyuarat* CPG : Management of anterior crossbite in mixed dentition (2nd edition)
24 Jul	Lecture by Prof. Dr. Mike Morgan on "Economic Analysis in Preventive Dental Programmes".
26 Jul	*Mesyuarat Jawatankuasa Teknikal Akreditasi 4/2012*
27 Jul	*Mesyuarat Jawatankuasa Penilaian dan Pewartaan Pakar-pakar Pergigian*
31 Jul	*Mesyuarat Kajian Semula Pengurusan*
8 Aug	*Mesyuarat KPK Khas Bil 2/2012*
8 Aug	Lecture by Dr. Donald Alexander Cameron on 'The Control of Snoring and Obstructive Sleep Apnoea using an Intra-oral Appliance"
9 Aug	*Mesyuarat JDPKP 4/2012*
17 Aug	*Mesyuarat Majlis Pergigian Malaysia Bil 99*
26-28 Aug	4th Asian Chief Dental Officers Meeting 2012
30 Aug	*Mesyuarat J/K Pemandu Keb. NOHSA 2010*

DATE	EVENTS
5 Sept	*Mesyuarat JK Pindaan Akta Pergigian 1971 dengan pihak berkepentingan*
10 Sept	*Mesyuarat KPK Khas Bil 3/2012*
10 Sept	*Mesyuarat JK Pemandu Perkhidmatan Sokongan Operasi dan Penyenggaraan OHCIS & eKL (Pergigian) Bil 3/2012*
11-Sept	*Mesyuarat* Quick reference & Patient Information leaflet bagi CPG Management of avulsed permanent anterior teeth in children KKM bil 2/2012
12 Sept	*Perbincangan berkaitan Draf Rang Undang-Undang Pergigian 2012*
28 Sept	*Mesyuarat JK Penempatan & Pertukaran Pegawai Pergigian*
13 Sept	National Oral Health Plan (NOHP) Executive Committee Meeting
20 Sept	*Mesyuarat* CPG : Management of ameloblastoma
25-27 Sept	*Kursus NIA*
25-27 Sept	ASEAN Joint Coordinating Committee (AJCCs) and Healthcare Services Sectoral Working Group (HSSWG) Meeting & 71st CCS meeting
4 Okt	*Mesyuarat Jawatankuasa Teknikal Akreditasi Pergigian Bil 5/2012*
8 Okt	*Mesyuarat KPK Khas Bil 4/2012*
9-10 Okt	*Mesyuarat Interaktif ISO*
17 Okt	*Mesyuarat* CPG : Management of anterior crossbite in mixed dentition (2nd edition)
22 Okt	*Seminar Akreditasi Programme Pengajian Pergigian*
23-24 Okt	*Mesyuarat JDPKP 5/2012*
31 Okt -2 Nov	*Bengkel Penyediaan SOP Perkhidmatan Pergigian Sekolah*
05-Nov	*Mesyuarat* CPG : Antibiotic prophylaxis against wound infection for oral surgical procedures (2nd edition)
24-25 Nov	*Mesyuarat KPK Khas Bil 5/2012*
6-10 Nov	NOHSA 2010 Seminar
19-20 Nov	Audit Re-Certification
22 Nov	*Mesyuarat Majlis Pergigian Malaysia Bil 100*
3 Dec	*Mesyuarat JK Pemandu Perkhidmatan Sokongan Operasi dan Penyenggaraan OHCIS & eKL (Pergigian) Bil 4/2012*
3-5 Dec	*Bengkel Kepakaran Pergigian KKM 2012*
6 Dec	*Mesyuarat Jawatankuasa Teknikal Akreditasi Pergigian 6/2012*
17-18 Dec	*Mesyuarat JDPKP 5/2012*
20 Dec	*Mesyuarat JK Penempatan & Pertukaran Pegawai Pergigian*
15-16 Dec	*Mesyuarat KPK Khas Bil 6/2012*

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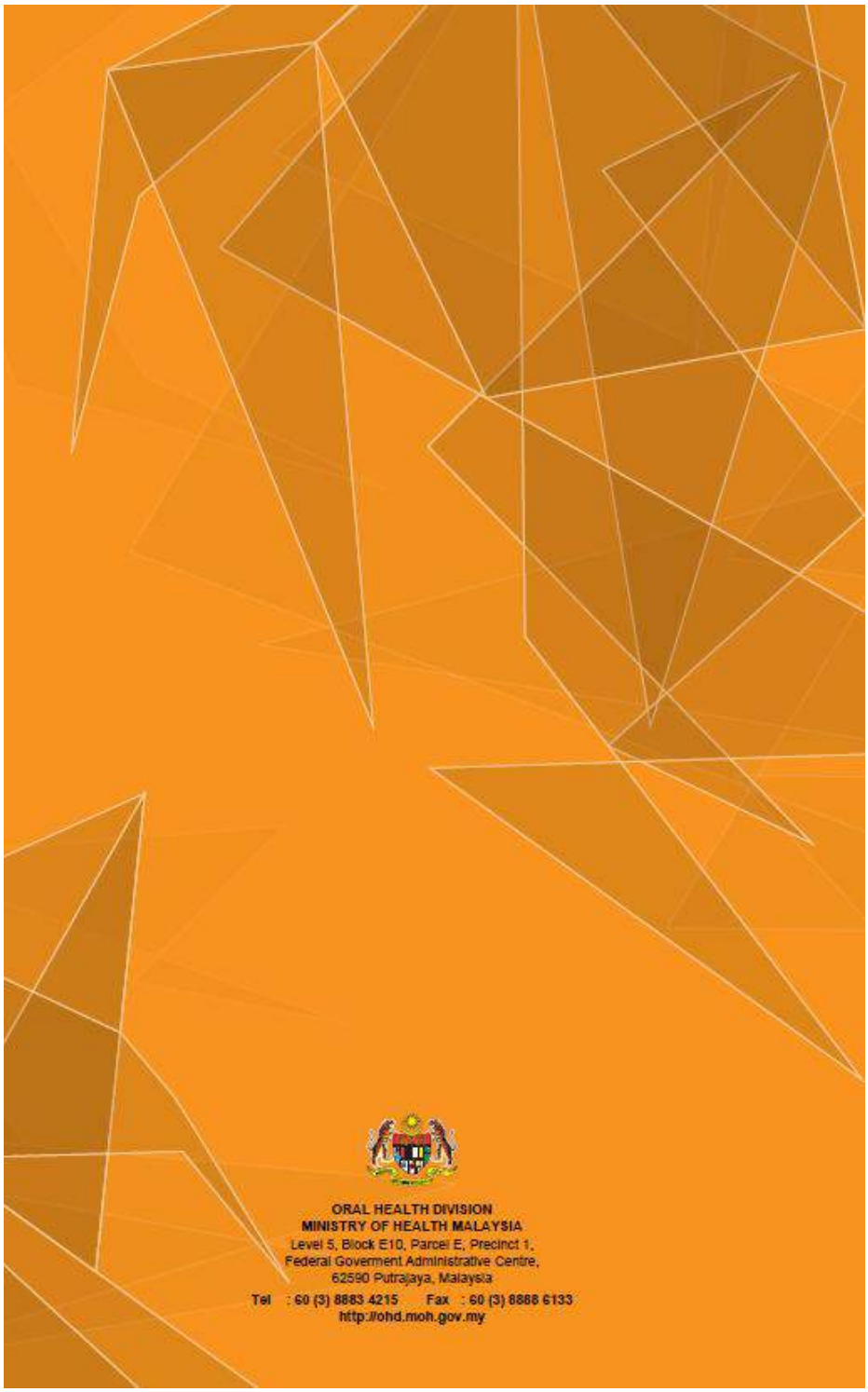

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