

2014 Health Manpower Survey

Summary of the Characteristics of Radiographers

I. Radiographers Covered

The radiographers covered in the 2014 Health Manpower Survey (HMS) includes both diagnostic and therapeutic radiographers.

1.1 Diagnostic Radiographers

1.1.1 Diagnostic radiographers refer to those radiographers (Category D) registered with the Radiographers Board of Hong Kong under the Supplementary Medical Professions Ordinance (Chapter 359) as at the survey reference date - 31.3.2014.

1.1.2 The number of diagnostic radiographers covered was 1 649.

1.1.3 Of the 1 649 diagnostic radiographers covered, 581 had responded to the survey, giving an overall response rate of 35.2%. Among the respondents, 542 (93.3%) were economically active^{*†} (active) in the local diagnostic radiography profession as at 31.3.2014 and 39 (6.7%) reported to be economically inactive^{*‡} (inactive) in the local diagnostic radiography profession (**Chart A**).

1.1.4 Of the 542 active diagnostic radiographers enumerated, 541 (99.8%) were practising in the local diagnostic radiography profession and one (0.2%) was seeking job during the 30 days before the survey. The survey results presented in paragraph 1.1.6 below were based on the 541 responding diagnostic radiographers who were practising in the local diagnostic radiography profession as at 31.3.2014. As certain questionnaires contained missing information, percentages presented below may not add up to 100%.

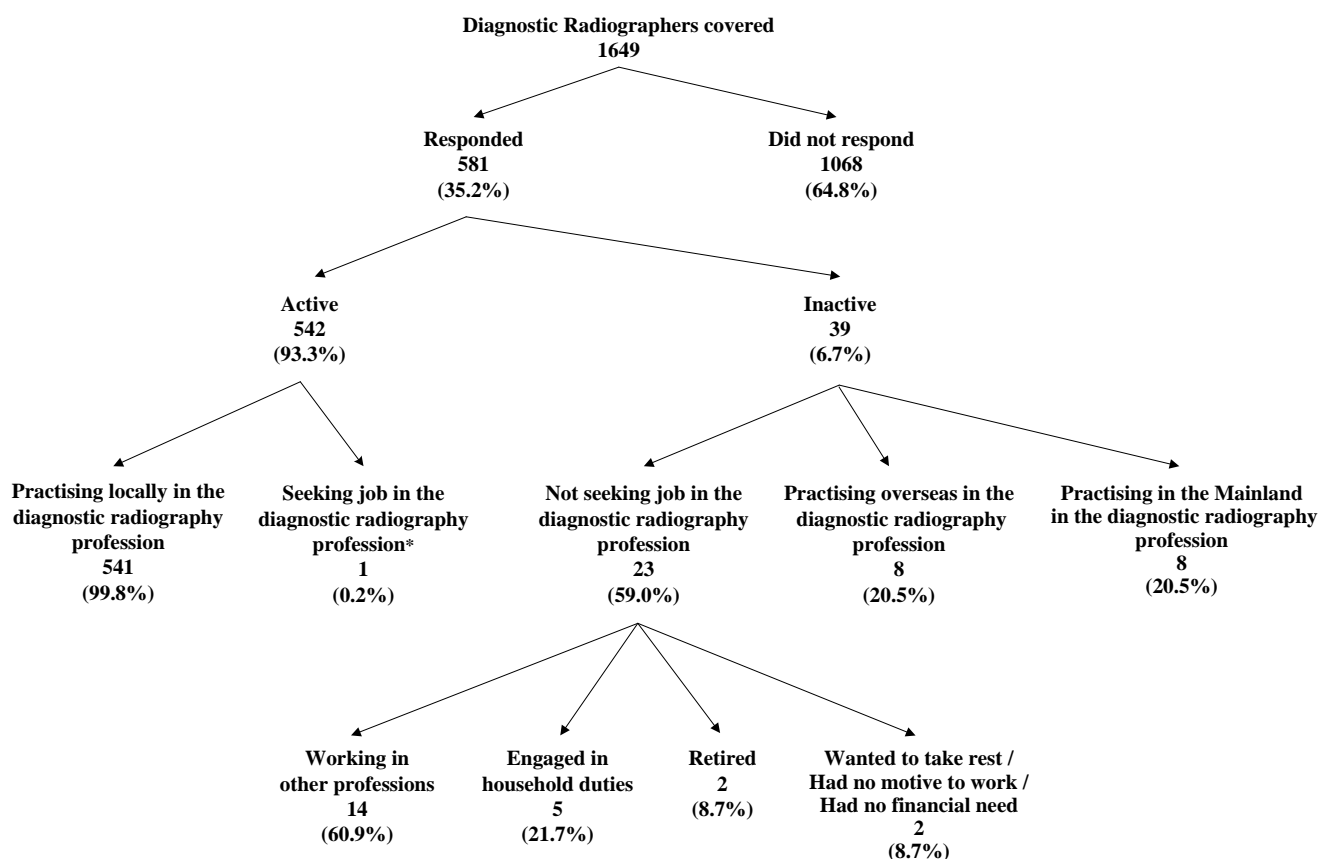
1.1.5 Of the 39 inactive diagnostic radiographers, eight reported practising overseas, eight reported practising in the Mainland and 23 reported not seeking job in the local diagnostic radiography profession during the 30 days before the survey (**Chart A**). Among the 23 inactive diagnostic radiographers who reported not seeking job, the main reasons reported for not seeking jobs included: 14 (60.9%) were working in other professions, five (21.7%) were engaged in household duties, two (8.7%) were retired and two (8.7%) wanted to take rest / had no motive to work / had no financial need.

* In the survey, the criteria used in defining economically active / inactive followed those recommended by the International Labour Organization, which are also being used by the Census and Statistics Department in Hong Kong.

† “Economically active” diagnostic radiographers comprised all “employed” and “unemployed” diagnostic radiographers. “Employed” diagnostic radiographers referred to those diagnostic radiographers practising in the diagnostic radiography profession in Hong Kong during the survey period, while “unemployed” diagnostic radiographers referred to those diagnostic radiographers who (a) were not practising in the diagnostic radiography profession during the survey period; (b) had been available for work during the seven days before the survey; and (c) had sought work in the diagnostic radiography profession during the 30 days before the survey

‡ “Economically inactive” diagnostic radiographers comprised the diagnostic radiographers who were not practising in the diagnostic radiography profession in Hong Kong during the survey period, excluding those who had been on leave during the survey period and who were “economically active” “unemployed”

Chart A : Activity Status of Diagnostic Radiographers Covered



Note : * Figure refers to the number of responding diagnostic radiographer who (a) was not practising in the diagnostic radiography profession in Hong Kong during the survey period; (b) had been available for work during the seven days before the survey; and (c) had sought work in the diagnostic radiography profession during the 30 days before the survey.

1.1.6 One active diagnostic radiographer did not indicate gender. Among the remaining 540 active diagnostic radiographers enumerated who were practising in the local diagnostic radiography profession, 275 (50.9%) were male and 265 (49.1%) were female, giving an overall sex ratio (males per 100 females) of 104. Apart from five active diagnostic radiographers who did not indicate age, the median age of the remaining 536 active diagnostic radiographers enumerated was 42.5 years. The median age of the active female diagnostic radiographers enumerated were 42.0 years and that of their male counterparts was 43.0 years.

1.1.7 The responding active diagnostic radiographers were requested to indicate the characteristics of their main jobs^{*}. Distribution of the main job by sector showed that 274 (50.6%) of the active diagnostic radiographers were working in the Hospital Authority, followed by those working in the private sector (43.3%), the Government, academic and subvented sectors (6.1%). Among the 234 active diagnostic radiographers enumerated who were working in the private sector, the largest proportion (55.6%) were working in medical and X-ray laboratory, followed by those working in private hospital[†] (37.2%) and miscellaneous health services centre (3.0%).

1.1.8 The median age of the active diagnostic radiographers enumerated was 49.0 years for those working in Government, academic and subvented sectors, followed by 46.0 years for those working in the private sector and 40.0 years in the Hospital Authority.

1.1.9 Of the 541 active diagnostic radiographers enumerated, 91.7% spent most of their working time on diagnostic stream, followed by 6.1% on administration / management, 1.1% on teaching and 0.2% on research.

1.1.10 The median number of hours of work (excluding meal breaks) per week of the 541 active diagnostic radiographers enumerated was 42.0 hours. Among them, 109 (20.1%) were required to undertake on-call duty, with a median of 16.0 hours of on-call duty (excluding normal duty) per week.

1.1.11 Of the 541 active diagnostic radiographers enumerated, 50.1% held Bachelor's Degree, 26.4% held Professional Diploma, 10.7% held Certificate, 7.4% held Higher Certificate and 4.6% held Diploma as their basic qualifications.

1.1.12 Of the 541 active diagnostic radiographers enumerated, 347 (64.1%) received / were receiving additional training. Of the 347 active diagnostic radiographers with additional training, 17 (4.9%) had not yet completed the additional training, 159 (45.8%) held Master's Degree, 56 (16.1%) held Bachelor's Degree and 74 (21.3%) held Certificate / Post-experience Certificate / Post-registration Certificate / Higher Certificate as the highest qualification.

* Main jobs referred to the jobs in which the diagnostic radiographers had spent most of their working time

† Refers to private institutions licensed under the Hospitals, Nursing Homes and Maternity Homes Registration Ordinance (Chapter 165).

1.1.13 Of the 347 diagnostic radiographers enumerated who received / were receiving additional training, some of them selected more than one field of additional training. The total number of count of active diagnostic radiographers who received / were receiving additional training was 516, in which 29.1% were trained / receiving training in diagnostic radiography, 19.4% in healthcare (medical imaging and radiation technology), 17.6% in ultrasonography / medical ultrasonography, 12.0% in magnetic resonance imaging, 9.1% in healthcare management / health services management, 5.0% in nuclear medicine / nuclear medicine technology and 2.5% in computer radiography.

1.1.14 Of the 347 diagnostic radiographers who received / were receiving additional training, 235 (67.7%) were trained / receiving in one field. Among them, 32.8% were trained / receiving training in diagnostic radiography, 24.7% in ultrasonography / medical ultrasonography, 18.7% in healthcare (medical imaging and radiation technology), 7.7% in magnetic resonance imaging, 5.5% in healthcare management / health services management, 3.4% in nuclear medicine / nuclear medicine technology and 2.1% in computer radiography.

1.1.15 Regarding Continuing Professional Development (CPD) activities, 314 (58.0%) of the active diagnostic radiographers reported that they had participated in CPD activities in 2014, 207 (38.3%) had not participated in any CPD activities and 20 (3.7%) did not report whether they had participated in CPD activities or not. Among the 314 active diagnostic radiographers enumerated who had participated in CPD activities, the distribution of CPD credits attained in the past 12 months was: 1 to 10 credits (54.8%), 11 to 20 credits (29.0%), 21 to 30 credits (10.2%), 31 to 40 credits (3.8%) and more than 40 credits (2.2%).

1.2 Therapeutic Radiographers

1.2.1 Therapeutic radiographers refer to those radiographers (Category T) registered with the Radiographers Board of Hong Kong under the Supplementary Medical Professions Ordinance (Chapter 359) as at the survey reference date - 31.3.2014.

1.2.2 The number of therapeutic radiographers covered was 318.

1.2.3 Of the 318 therapeutic radiographers covered, 117 had responded to the survey, giving an overall response rate of 36.8%. Among the respondents, 110 (94.0%) were economically active^{*†} (active) in the local therapeutic radiography profession as at 31.3.2014 and seven (6.0%) reported to be economically inactive^{*‡} (inactive) in the local therapeutic radiography profession (**Chart B**).

1.2.4 Of the 110 active therapeutic radiographers enumerated, 109 (99.1%) were practising in the local therapeutic radiography profession and one (0.9%) was seeking job in the local therapeutic radiography profession during the 30 days before the survey. The survey results presented in paragraph 1.2.6 below were based on the 109 responding therapeutic radiographers practising in the local therapeutic radiography profession as at 31.3.2014. As certain questionnaires contained missing information, percentages presented below may not add up to 100%.

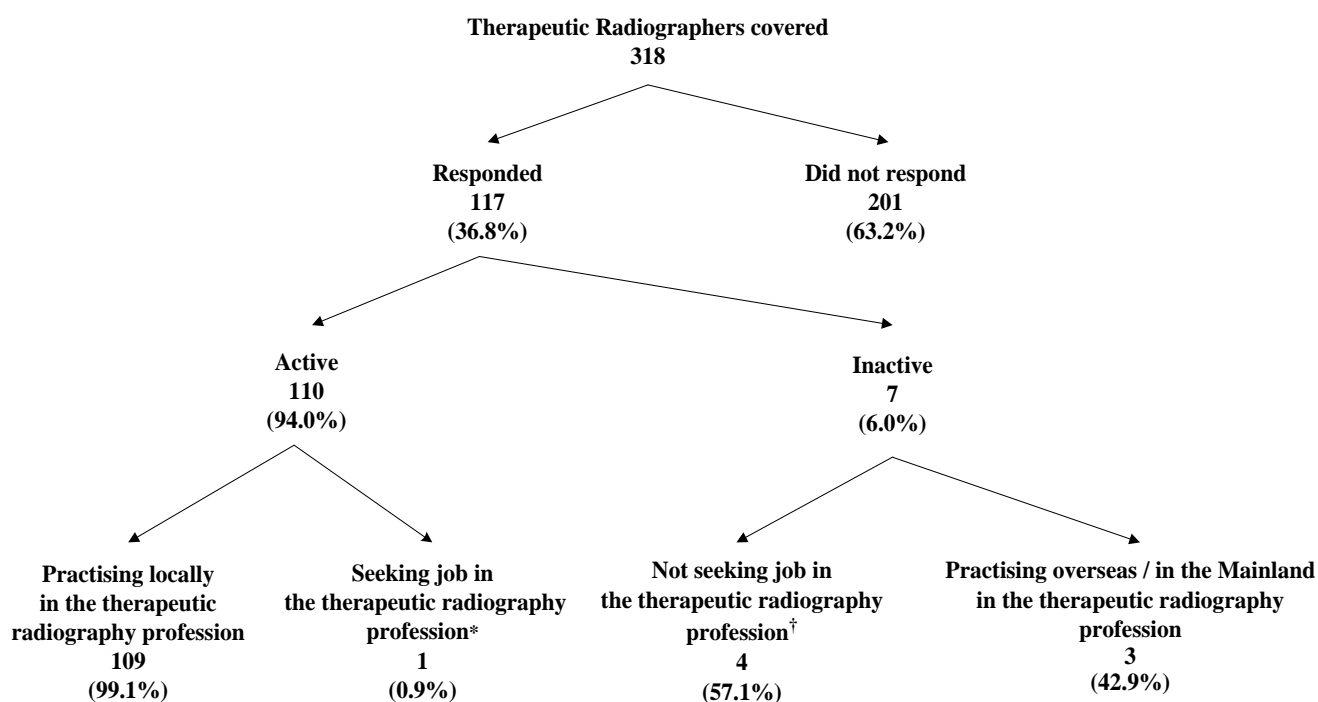
1.2.5 Of the seven inactive therapeutic radiographers, three therapeutic radiographers reported practising overseas / in the Mainland and four reported not seeking job in the local therapeutic radiography profession during the 30 days before the survey (**Chart B**).

* In the survey, the criteria used in defining economically active / inactive followed those recommended by the International Labour Organization, which are also being used by the Census and Statistics Department in Hong Kong.

† “Economically active” therapeutic radiographers comprised all “employed” and “unemployed” therapeutic radiographers. “Employed” therapeutic radiographers referred to those therapeutic radiographers practising in the therapeutic radiography profession in Hong Kong during the survey period, while “unemployed” therapeutic radiographers referred to those therapeutic radiographers who (a) were not practising in the therapeutic radiography profession during the survey period; (b) had been available for work during the seven days before the survey; and (c) had sought work in the therapeutic radiography profession during the 30 days before the survey.

‡ “Economically inactive” therapeutic radiographers comprised the therapeutic radiographers who were not practising in the therapeutic radiography profession in Hong Kong during the survey period, excluding those who had been on leave during the survey period and who were “economically active” “unemployed”.

Chart B :Activity Status of Therapeutic Radiographers Covered



Notes : * Figure refers to the number of responding therapeutic radiographer who (a) was not practising in the therapeutic radiography profession in Hong Kong during the survey period; (b) had been available for work during the seven days before the survey; and (c) had sought work in the therapeutic radiography profession during the 30 days before the survey.

† Figure refers to the number of responding therapeutic radiographers who reported working in other professions, engaged in household duties, etc.

1.2.6 One active therapeutic radiographer did not indicate gender. Among the remaining 108 active therapeutic radiographers enumerated who were practising in the local therapeutic radiography profession, 55 (50.9%) were male and 53 (49.1%) were female, giving an overall sex ratio (males per 100 females) of 104. Apart from three therapeutic radiographers who did not indicate age, the median age of the remaining 106 active therapeutic radiographers enumerated was 34.0 years. The median age of the active female therapeutic radiographers enumerated was 31.0 years and that of their male counterparts was 38.0 years.

1.2.7 The responding active therapeutic radiographers were requested to indicate the characteristics of their main jobs*. Distribution of the main job by sector showed that larger proportion (59.6%) were working in the Hospital Authority, followed by the academic and private sectors (40.4%).

1.2.8 The median age of the active therapeutic radiographers enumerated was 35.0 years for those working in the Hospital Authority, and 32.0 years for those working in the academic and private sectors.

* Main jobs referred to the jobs in which the therapeutic radiographers had spent most of their working time.

1.2.9 Of the 109 active therapeutic radiographers enumerated, 90.8% spent most of their working time on therapeutic stream, followed by 6.4% on administration / management and 2.8% on teaching.

1.2.10 The median number of hours of work (excluding meal breaks) per week of the 109 active therapeutic radiographers enumerated was 39.0 hours. Among them, two (1.8%) therapeutic radiographers were required to undertake on-call duty (excluding normal duty) per week.

1.2.11 Of the 109 active therapeutic radiographers enumerated, 77.1% held Bachelor's Degree, 11.0% held Diploma and 10.1% held Professional Diploma as their basic qualifications.

1.2.12 Of the 109 active therapeutic radiographers enumerated, 62 (56.9%) received / were receiving additional training. Of the 62 active therapeutic radiographers with additional training, 49 (79.0%) held Master's Degree and six (9.7%) held Certificate as the highest qualification.

1.2.13 Among those therapeutic radiographers who received / were receiving additional training, some of them selected more than one field of additional training. The total number of count of active therapeutic radiographers who received / were receiving additional training was 71, in which 36.6% were trained / receiving training in healthcare (medical imaging & radiation technology), 21.1% in healthcare management / health services management and 4.2% for each field in biomedical sciences, magnetic resonance imaging and counselling

1.2.14 Of the 62 active therapeutic radiographers enumerated who received / were receiving additional training, 50 (80.6%) were trained in one field. Among them, 44.0% were trained / receiving training in healthcare (medical imaging & radiation technology), 18.0% in healthcare management / health services management and 6.0% in biomedical sciences.

1.2.15 Regarding Continuing Professional Development (CPD) activities, 77 (70.6%) of the active therapeutic radiographers reported that they had participated in CPD activities in 2014, 29 (26.6%) had not participated in any CPD activities and three (2.8%) did not report whether they had participated in CPD activities or not. Among the 77 active therapeutic radiographers enumerated who had participated in CPD, the distribution of CPD credits attained in the past 12 months was: 1 to 10 credits (29.9%), 11 to 20 credits (49.4%), 21 to 30 credits (13.0%) and more than 40 credits (7.8%).

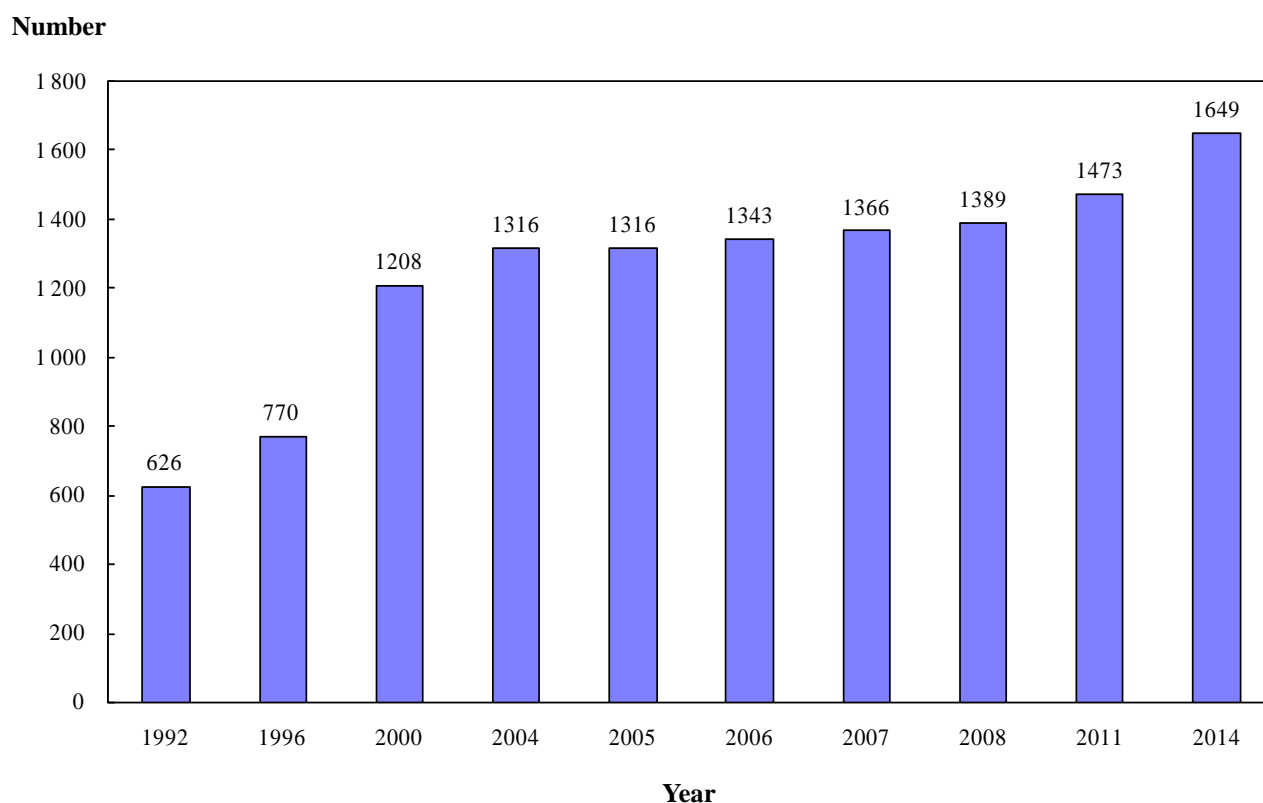
II. Trend Analysis

Comparison of findings of the 2014 HMS with those surveys before 2004 should be made with caution as the survey methodology and reference date had been changed. With the enactment of the Radiographers (Registration and Disciplinary Procedure) Regulation (Chapter 359H), registration of the profession of radiographers commenced on 1 July 1995 while disciplinary control of the profession was effective on 1 November 1996, it is mandatory for a person practising diagnostic radiography / therapeutic radiography in Hong Kong to hold a valid practising certificate.

2.1 Diagnostic Radiographers

2.1.1 Between 1992 and 2014, the number of diagnostic radiographers increased from 626 to 1 649 (**Chart C**).

Chart C : Number of Diagnostic Radiographers Covered by Year (1992, 1996, 2000, 2004, 2005, 2006, 2007, 2008, 2011 and 2014)



Note : Figures of 1992 and 1996 refer to the number of diagnostic radiographers reported by the responding institutions as at the 1st of July of the respective years. Figure of 2000 refers to the number of diagnostic radiographers registered with the Radiographers Board of Hong Kong as at the 1st of July 2000, whereas the figures of 2004 to 2014 refer to that as at the 31st of March of the respective years.

2.1.2 The sex ratio (males per 100 females) of active diagnostic radiographers enumerated decreased from 187 in 1982 to 104 in 2014 (**Table A**).

2.1.3 The mean age of the active diagnostic radiographers enumerated exhibited an increasing trend from 33.0 years in 1982 to 43.2 years in 2014 (**Table A**).

2.1.4 From 1982 to 1990, the Government and academic* sectors were the largest employer of active diagnostic radiographers enumerated (68.6% to 98.7%). The Hospital Authority had been the largest employer since its setup in 1991, while the proportion of active diagnostic radiographers employed in Government and academic* sectors decreased to 6.1% in 2014. On the other hand, the proportion of active diagnostic radiographers working in the private sector increased from 2.3% in 1982 to 43.3% in 2014 (**Table A**).

Table A : Selected Characteristics of Active Diagnostic Radiographers Enumerated (1982, 1984, 1987, 1990, 1992, 1996, 2000, 2004, 2005, 2006, 2007, 2008, 2011 and 2014)

Characteristics	Year													
	1982	1984	1987	1990	1992	1996	2000	2004	2005	2006	2007	2008	2011	2014
A. Diagnostic Radiographers Covered*	-	-	-	-	626	770	1 208	1 316	1 316	1 343	1 366	1 389	1 473	1 649
B. Active Diagnostic Radiographers Enumerated														
Number Enumerated	175	234	487	555	422	657	856	668	725	737	568	528	665	541
Sex														
Male	114	153	306	329	244	343	432	331	347	353	283	247	320	275
Female	61	81	181	226	178	314	424	337	376	382	285	281	337	265
Unknown	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	2	2	N.A.	N.A.	8	1
Sex Ratio (males per 100 females)	187	189	169	146	137	109	102	98	92	92	99	88	95	104
Mean Age	33.0	32.5	33.2	33.6	34.0	34.2	36.5	38.7	37.8	39.1	40.6	39.3	42.7	43.2
Median Age	-	-	-	-	-	-	35.0	38.0	37.0	38.0	39.0	39.0	42.0	42.5
Sector of Work[†]														
Hospital Authority	N.A.	N.A.	N.A.	N.A.	259	427	483	354	381	372	270	283	344	274
					(61.4%)	(65.0%)	(56.4%)	(53.0%)	(52.6%)	(50.5%)	(47.5%)	(53.6%)	(51.7%)	(50.6%)
Private	4	3	136	174	152	211	322	267	299	321	268	215	280	234
	(2.3%)	(1.3%)	(27.9%)	(31.4%)	(36.0%)	(32.1%)	(37.6%)	(40.0%)	(41.2%)	(43.6%)	(47.2%)	(40.7%)	(42.1%)	(43.3%)
Government & Academic [‡]	171	231	351	381	11	19	51	47	40	42	30	29	37	33
	(97.7%)	(98.7%)	(72.1%)	(68.6%)	(2.6%)	(2.9%)	(6.0%)	(7.0%)	(5.5%)	(5.7%)	(5.3%)	(5.5%)	(5.6%)	(6.1%)
Unknown	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	5	2	N.A.	1	4	N.A.
									(0.7%)	(0.3%)		(0.2%)	(0.6%)	

Notes : * Figures of 1992 and 1996 refer to the number of diagnostic radiographers reported by the responding institutions as at the 1st of July of the respective years. Figure of 2000 refers to the number of diagnostic radiographers registered with the Radiographers Board of Hong Kong as at the 1st of July 2000, whereas the figures of 2004 to 2014 refer to that as at the 31st of March of the respective years.

† In 2004, 2005, 2006, 2007, 2008, 2011 and 2014 the sector refers to the sector for the main job.

‡ Subvented sector was included in the 1982, 1984, 1987, 1990, 2006, 2007, 2008, 2011 and 2014 HMS and military was also included in the 1987 HMS.

There may be slight discrepancy between the sum of individual items and the total due to rounding.

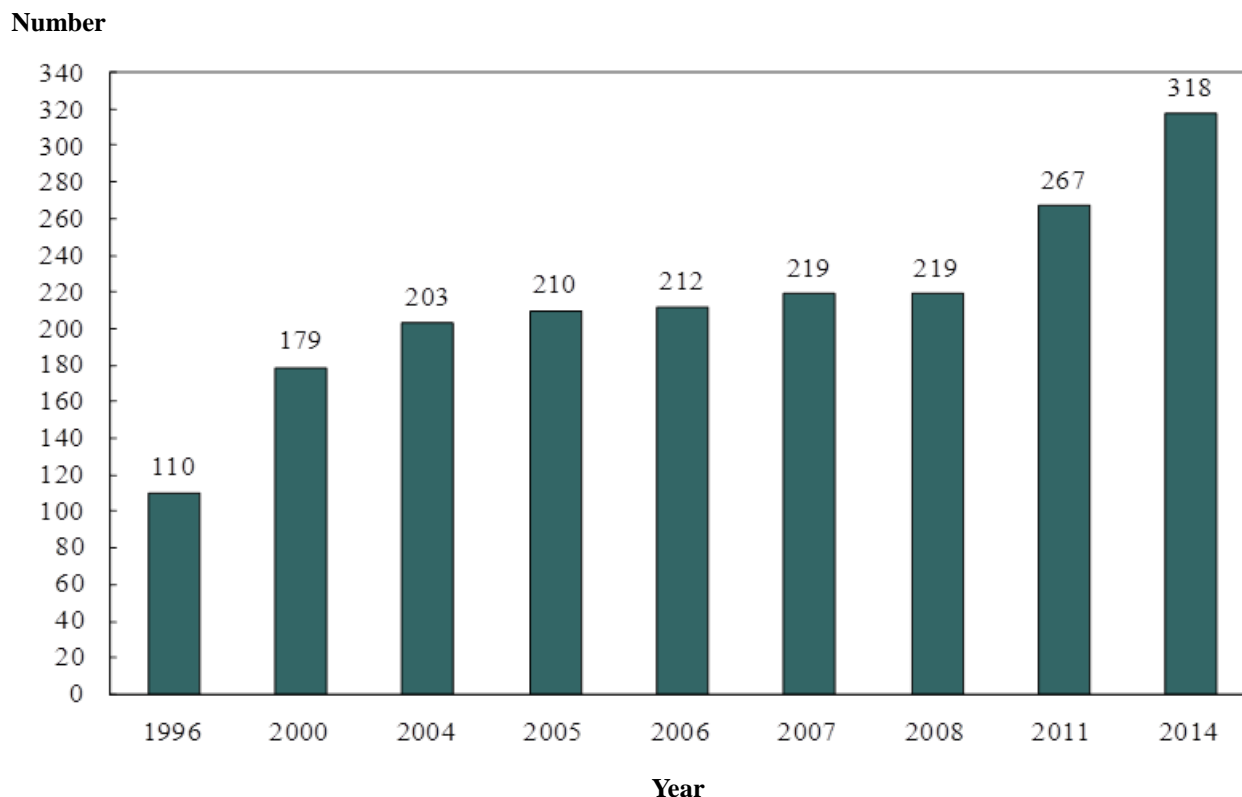
N.A. Not applicable

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2.2 Therapeutic Radiographers

2.2.1 Between 1996 and 2014, the number of therapeutic radiographers increased from 110 to 318 (Chart D).

Chart D : Number of Therapeutic Radiographers Covered by Year (1996, 2000, 2004, 2005, 2006, 2007, 2008, 2011 and 2014)



Note : Figure of 1996 refers to the number of therapeutic radiographers reported by the responding institutions as at the 1st of July 1996. Figure of 2000 refers to the number of therapeutic radiographers registered with the Radiographers Board of Hong Kong as at the 1st of July 2000, whereas the figures of 2004 to 2014 refer to that as at the 31st of March of the respective years.

2.2.2 The sex ratio (males per 100 females) of active therapeutic radiographers enumerated decreased from 280 in 1982 in to 104 in 2014 (Table B).

2.2.3 The mean age of the active therapeutic radiographers enumerated had been fluctuating in the range of 31.8 years and 36.3 years between 1982 and 2014 (Table B).

2.2.4 From 1982 to 1990, all active therapeutic radiographers enumerated worked in the Government, except that a few of them (5.3%) working in the academic and private sectors in 1990. Since the setup of Hospital Authority in 1991, it had been the largest employer, but the proportion of the active therapeutic radiographers enumerated decreased from 91.7% in 1992 to 59.6% in 2014. On the other hand, the proportion of therapeutic radiographers working in the academic and private sectors increased from 5.3% in 1990 to 40.4% in 2014 (Table B).

Table B : Selected Characteristics of Active Therapeutic Radiographers Enumerated (1982, 1984, 1987, 1990, 1992, 1996, 2000, 2004, 2005, 2006, 2007, 2008, 2011 and 2014)

Characteristics	Year													
	1982	1984	1987	1990	1992	1996	2000	2004	2005	2006	2007	2008	2011	2014
A. Therapeutic Radiographers Covered*	-	-	-	-	-	110	179	203	210	212	219	219	267	318
B. Active Therapeutic Radiographers Enumerated														
Number Enumerated	38	58	73	76	60	88	120	99	123	122	100	98	102	109
Sex														
Male	28	39	46	49	33	60	71	54	66	66	53	50	57	55
Female	10	19	27	27	27	28	49	45	57	55	47	48	45	53
Unknown	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	1	N.A.	N.A.	N.A.	1
Sex Ratio (males per 100 females)	280	205	170	181	122	214	145	120	116	120	113	104	127	104
Mean Age	34.8	33.8	31.8	34.5	33.6	32.9	33.3	35.6	33.7	35.1	35.6	36.3	36.0	35.6
Median Age	-	-	-	-	-	-	32.0	33.0	32.0	33.0	34.0	35.0	35.0	34.0
Sector of Work[†]														
Government	38	58	73	72	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
	(100.0%)	(100.0%)	(100.0%)	(94.7%)										
Hospital Authority	N.A.	N.A.	N.A.	N.A.	55	79	107	77	100	99	74	75	71	65
					(91.7%)	(89.8%)	(89.2%)	(77.8%)	(81.3%)	(81.1%)	(74.0%)	(76.5%)	(69.6%)	(59.6%)
Academic & Private	N.A.	N.A.	N.A.	4	5	9	13	21	23	22	26	23	30	44
				(5.3%)	(8.3%)	(10.2%)	(10.8%)	(21.2%)	(18.7%)	(18.0%)	(26.0%)	(23.5%)	(29.4%)	(40.4%)
Unknown	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	1	N.A.	1	N.A.	N.A.	1	N.A.
								(1.0%)		(0.8%)			(1.0%)	

Notes : * Figure of 1996 refers to the number of therapeutic radiographers reported by the responding institutions as at the 1st of July 1996. Figure of 2000 refers to the number of therapeutic radiographers registered with the Radiographers Board of Hong Kong as at the 1st of July 2000, whereas the figures of 2004 to 2014 refer to that as at the 31st of March of the respective years.

† In 2004, 2005, 2006, 2007, 2008, 2011 and 2014, the sector refers to the sector for the main job.

There may be slight discrepancy between the sum of individual items and the total due to rounding.

N.A. Not applicable

‘-’ Not available