



中華人民共和國香港特別行政區政府總部食物及衛生局  
Food and Health Bureau, Government Secretariat  
The Government of the Hong Kong Special Administrative Region  
The People's Republic of China

Our Ref. : L/M to FHB/H/1/26  
Your Ref. : CB2/PS/5/10

Tel No. : (852) 3509 8929  
Fax No. : (852) 2840 0467

14 August 2012

Ms Elyssa WONG  
Clerk to Subcommittee  
Subcommittee on Health Protection Scheme  
Panel on Health Services  
Legislative Council Complex  
1, Legislative Council Road  
Central

Dear Ms WONG,

**Panel on Health Services  
Subcommittee on Health Protection Scheme**

**Follow-up to the meeting on 21 May 2012**

I refer to your letter of 18 June 2012 on the captioned. The requested supplementary information is provided at **Annex**.

Yours sincerely,

A handwritten signature in black ink, appearing to read "Sheung-yuen LEE".

( Sheung-yuen LEE )  
for Secretary for Food and Health

c.c. Hospital Authority (Attn: Dr CHEUNG Wai-lun and Ms Eva TSUI)

Administration's Response to  
Follow-up to the meeting of Subcommittee on Health Protection  
Scheme of the Panel on Health Services on 21 May 2012

Item (a)(i) -

*Further breakdowns of the projected manpower requirement for doctors in the Hospital Authority ("HA") by specialty.*

Item (a)(ii) -

*Detailed information showing how the projected service workloads by specialty were translated into time requirement (man-hours) for doctors in carrying out the workload.*

Administration's response

The Hospital Authority (HA) adopts an integrated approach in projecting its future healthcare workforce requirements. The process starts with an overall assessment on the future service demand. The service demand projection uses age- and specialty-specific service utilization rates in a given year as the base, and takes into account anticipated changes resulting from various factors including population growth and ageing, and changes in healthcare services utilization pattern (please refer to Table 1.1-1.7 of **Appendix A**). The service demand projection results are then used to estimate the future manpower requirements for healthcare professionals in HA.

2. To estimate the required doctor manpower, the projected service workloads by specialty are first translated into time requirement (man-hours) for doctors in carrying out the workload. The basic steps and parameters involved are as follows:

- (a) **Identify specialty-specific doctor work profiles and the time required for each unit of work.** Together with clinicians of the respective specialties, the average time required for doctors in carrying out the tasks for each type of workload is worked out (please refer to Table 2 of Appendix A).
- (b) **Estimate total doctor workload for each specialty.** This is expressed in terms of doctor man-hours<sup>1</sup> required for carrying out

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<sup>1</sup> The estimated total doctor workload (man-hours)  
= summation of [(time required for each unit of workload) X (projected volume of service workload)]

the projected service workload (please refer to Table 3 in Appendix A) across all types of activities.

- (c) **Determine the required number of doctors to cover the projected doctor workload for each specialty** by dividing the projected total doctor workload (man-hours) by total work hours per doctor per year (please refer to Table 4 in Appendix A)<sup>2</sup>.

3. The projected manpower requirement for doctors in HA are presented in the below table.

**Projected manpower requirement for doctors in HA  
by specialty (base case scenario)**

Specialty	Doctor requirements			
	2008 (Actual)	2016	2021	2026
Accident & Emergency	434	517	554	596
Anaesthesiology	346	398	435	473
Clinical Oncology	127	148	164	181
Ear, Nose & Throat	81	91	97	102
Family Medicine	504	587	645	714
Medicine	1,119	1,246	1,319	1,455
Neurosurgery	87	96	102	107
Obstetrics & Gynaecology	216	260	266	268
Ophthalmology	144	177	194	214
Orthopaedics	297	354	366	391
Paediatrics	316	337	344	340
Pathology	203	238	254	273
Psychiatry	293	337	359	380
Radiology	238	312	356	405
Surgery <sup>(1)</sup>	525	622	665	712
Others	107	120	127	138
<b>Overall</b>	<b>5,035</b>	<b>5,839</b>	<b>6,248</b>	<b>6,749</b>

<sup>(1)</sup> Includes cardiothoracic surgery.

<sup>2</sup> The total work hours per doctor per year is derived based on the assumption that doctors carry out their duties in 42.3 out of the 52 weeks in a year, after discounting for rest days, annual leave, sick/maternity leave and training leave. This is an across-the-board parameter for all the specialties. The total work hours per doctor per year for each specialty, where applicable, is then calculated by multiplying 42.3 weeks by a specialty-specific projection parameter on average work hours per week (between 44 and 65 hours).



Item (b) –

*Further breakdowns of the projected manpower requirement for nurses in HA by stream.*

Administration's response

4. In manpower projection, all nurses are broadly categorized into two streams: general nurses and psychiatric nurses. The same set of service workload projections as outlined in paragraphs 1 and 2 is used to translate into nursing manpower requirement of general and psychiatric streams at different clinical settings (please refer to Tables 1 and 2 in **Appendix B**). The projection parameters and the required number of nurses for the general nursing stream (acute ward) and psychiatric nursing stream are at Tables 3 and 4 in Appendix B.

5. The projected manpower requirement for nurses in HA are presented in the below table.

**Projected manpower requirement for nurses in HA  
by stream (base case scenario)**

Stream	Nurse requirements			
	2008 (Actual)	2016	2021	2026
General	17,518	21,119	22,370	24,186
Psychiatric	1,953	2,455	2,587	2,725
<b>Overall</b>	<b>19,471</b>	<b>23,575</b>	<b>24,957</b>	<b>26,911</b>

Item (c)(i) –

*Statistics of attendances of general outpatient clinics and the corresponding strength of doctors in the period of 1998 to 2003 when the general outpatient clinics were placed under the management of the Department of Health.*

Administration's response

6. Please refer to Table 1 in **Appendix C**.

Item (c)(ii) –

*The number of patient days and number of attendances of Accident and Emergency services.*

Item (c)(iii) –

*Year-by-year statistics during the period of 1998-1999 to 2010-2011.*

Administration's response

7. Please refer to Table 2 in Appendix C.

Item (d) –

*Indicators adopted for assessing the effectiveness of new and outreach services provided by HA; whether the Administration had conducted any reviews on the effectiveness of services provided by HA, if so, provide the review outcomes.*

Administration's response

8. HA is continuously enhancing its service to meet the challenges of an increasing and aging population and advance in medical technology. Development of new service programmes is one of the strategies to enhance public hospital services. In introducing new service programmes, HA has taken into international experiences and medical evidence, as well as local experience and expert advice. Development of new service programmes usually goes through stages like trials and pilots, initial evaluation, full scale implementation and on-going evaluation, if appropriate. Key performance indicators would be developed in assessing the effectiveness of new service programmes.

9. One example is the outreach service in the Community Geriatric Assessment Service (CGAS). Through regular visits to Residential Care Homes for the Elderly (RCHEs), the CGAS provides outreach doctor consultation and multi-disciplinary services, and supports the better care of RCHE residents through carer training and infectious disease surveillance and control. Recent evaluation of the service showed that CGAS could significantly reduce hospital service utilization by the RCHE

residents<sup>3</sup>. For every 1 000 RCHE residents served by CGAS over a 90-day period, it could reduce:

- emergency attendance (by 12%);
- emergency admission to Medical specialty (by 15%);
- general outpatient attendances (by 23%);
- specialist outpatient attendances (by 23%); and
- non-acute patient days (for Medical/Rehabilitation/Infirmary) (by 11%).

**Food and Health Bureau  
Hospital Authority  
August 2012**

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<sup>3</sup> The evaluation was carried out in 2010 only in 66 RCHEs in Kowloon West Cluster when CGAS extended the outreach service in 2009.



**Table 1.1 - Actual and projected age-specific in-patient bed days per '000 population in 2008, 2016, 2021 and 2026<sup>1</sup>**

**Acute Care for General Specialties<sup>2</sup>**

Age Group	2008 <sup>(a)</sup>	2016 <sup>(b)</sup>	2021 <sup>(b)</sup>	2026 <sup>(b)</sup>
0-4	696.9	593.0	542.2	495.0
5-14	140.9	121.4	109.9	99.1
15-24	114.7	94.4	85.3	77.7
25-34	125.9	107.0	94.7	83.3
35-44	163.8	131.3	114.4	98.6
45-54	292.5	237.0	204.5	174.5
55-59	497.1	400.7	345.1	293.8
60-64	715.5	588.7	509.7	437.3
65-69	1095.1	872.9	759.6	655.1
70+	2768.0	2455.2	2017.0	1783.2
<b>Overall</b>	<b>509.6</b>	<b>476.9</b>	<b>450.5</b>	<b>441.6</b>

<sup>(a)</sup> Actual utilization rates

<sup>(b)</sup> Projected utilization rates

**Extended Care for General Specialties<sup>3</sup>**

Age Group	2008 <sup>(a)</sup>	2016 <sup>(b)</sup>	2021 <sup>(b)</sup>	2026 <sup>(b)</sup>
0-64	49.7	47.5	46.1	42.7
65+	1274.1	1222.4	1076.1	1031.1
<b>Overall</b>	<b>204.1</b>	<b>225.6</b>	<b>233.2</b>	<b>260.5</b>

<sup>(a)</sup> Actual utilization rates

<sup>(b)</sup> Projected utilization rates

**Psychiatry Specialty<sup>4</sup>**

	2008 <sup>(a)</sup>	2016 <sup>(b)</sup>	2021 <sup>(b)</sup>	2026 <sup>(b)</sup>
<b>Overall</b>	<b>143.7</b>	<b>142.5</b>	<b>144.6</b>	<b>146.2</b>

<sup>(a)</sup> Actual utilization rates

<sup>(b)</sup> Projected utilization rates

<sup>1</sup> Having factored in improvement in service efficiency and change in service delivery model over the projection horizon.

<sup>2</sup> The projection model only includes major specialties such as medicine, surgery, gynaecology, paediatrics and ophthalmology. Some specialties such as anesthesiology are not included in the projection model.

<sup>3</sup> Excluding Central Infirmary Waiting List (elders and/or disabled persons with chronic illnesses and who have reached the stage at which active and intensive medical treatment cannot reverse their health conditions, and are in need of continuous medical and nursing care on top of the total dependency on their activities of daily living may apply for Hospital Authority's (HA) General Infirmary Service. Eligible applicant will be put on the Central Infirmary Waiting List for placement in infirmary beds).

<sup>4</sup> Age-specific breakdown is not provided in the above as HA uses a methodology that does not have age group categorization to project psychiatric patients and associated workload.

**Table 1.2 - Actual and projected age-specific day-patient discharges per '000 population in 2008, 2016, 2021 and 2026<sup>5</sup>**

**Acute Care for General Specialties<sup>6</sup>**

<b>Age Group</b>	<b>2008<sup>(a)</sup></b>	<b>2016<sup>(b)</sup></b>	<b>2021<sup>(b)</sup></b>	<b>2026<sup>(b)</sup></b>
0-4	59.3	63.2	70.2	77.1
5-14	15.5	18.7	20.3	22.0
15-24	11.9	16.4	19.0	21.4
25-34	17.4	19.2	22.0	24.8
35-44	30.1	32.3	36.0	39.6
45-54	52.5	56.0	61.5	67.0
55-59	80.8	89.0	97.7	106.4
60-64	103.4	111.5	123.0	134.6
65-69	124.5	140.5	156.2	171.8
70+	120.3	155.6	185.0	213.9
<b>Overall</b>	<b>47.3</b>	<b>60.1</b>	<b>72.4</b>	<b>85.5</b>

<sup>(a)</sup> Actual utilization rates

<sup>(b)</sup> Projected utilization rates

Note: For Extended Care for General Specialties and Psychiatry Specialty, their day-patient discharges are negligible and is therefore assumed nil under the demand projections.

<sup>5</sup> Having factored in improvement in service efficiency and change in service delivery model over the projection horizon.

<sup>6</sup> The projection model only includes major specialties such as medicine, surgery, gynaecology, paediatrics and ophthalmology. Some specialties such as anesthesiology are not included in the projection model.



**Table 1.3 - Actual and projected age-specific specialist out-patient total attendances per '000 population in 2008, 2016, 2021 and 2026**

**General Specialties other than Psychiatry Specialty**

<b>Age Group</b>	<b>2008<sup>(a)</sup></b>	<b>2016<sup>(b)</sup></b>	<b>2021<sup>(b)</sup></b>	<b>2026<sup>(b)</sup></b>
0-4	657.2	657.2	657.2	657.2
5-14	323.1	323.1	323.1	323.1
15-24	229.5	229.5	229.5	229.5
25-34	389.2	389.2	389.2	389.2
35-44	485.0	485.0	485.0	485.0
45-54	742.4	742.4	742.4	742.4
55-59	1073.1	1073.1	1073.1	1073.1
60-64	1346.5	1346.5	1346.5	1346.5
65-69	1674.8	1674.8	1674.8	1674.8
70+	2207.0	2207.0	2207.0	2207.0
<b>Overall<sup>7</sup></b>	<b>749.0</b>	<b>819.6</b>	<b>867.7</b>	<b>916.0</b>

<sup>(a)</sup> Actual utilization rates

<sup>(b)</sup> Projected utilization rates

**Psychiatry Specialty<sup>8</sup>**

	<b>2008<sup>(a)</sup></b>	<b>2016<sup>(b)</sup></b>	<b>2021<sup>(b)</sup></b>	<b>2026<sup>(b)</sup></b>
<b>Overall</b>	<b>92.2</b>	<b>104.2</b>	<b>108.2</b>	<b>111.8</b>

<sup>(a)</sup> Actual utilization rates

<sup>(b)</sup> Projected utilization rates

<sup>7</sup> Due to the change in demographic structure, the projected overall utilization rate for 2016, 2021 and 2026 are projected to increase as compared with base year despite that the same age-specific utilization rates are used in calculation.

<sup>8</sup> Age-specific breakdown is not provided in the above as HA uses a methodology that does not have age group categorization to project psychiatric patients and associated workload.

**Table 1.4 - Actual and projected age-specific Accident & Emergency total attendances per '000 population in 2008, 2016, 2021 and 2026**

<b>Age Group</b>	<b>2008<sup>(a)</sup></b>	<b>2016<sup>(b)</sup></b>	<b>2021<sup>(b)</sup></b>	<b>2026<sup>(b)</sup></b>
0-4	689.8	689.8	689.8	689.8
5-14	226.1	226.1	226.1	226.1
15-24	224.5	224.5	224.5	224.5
25-34	230.3	230.3	230.3	230.3
35-44	207.8	207.8	207.8	207.8
45-54	246.1	246.1	246.1	246.1
55-59	278.4	278.4	278.4	278.4
60-64	308.0	308.0	308.0	308.0
65-69	399.3	399.3	399.3	399.3
70+	747.0	747.0	747.0	747.0
<b>Overall<sup>9</sup></b>	<b>303.2</b>	<b>317.2</b>	<b>326.1</b>	<b>337.0</b>

<sup>(a)</sup> Actual utilization rates

<sup>(b)</sup> Projected utilization rates

<sup>9</sup> Due to the change in demographic structure, the projected overall utilization rate for 2016, 2021 and 2026 are projected to increase as compared with base year despite that the same age-specific utilization rates are used in calculation.

**Table 1.5 - Actual and projected age-specific general out-patient attendances per '000 population in 2008, 2016, 2021 and 2026**

<b>Age Group</b>	<b>2008<sup>(a)</sup></b>	<b>2016<sup>(b)</sup></b>	<b>2021<sup>(b)</sup></b>	<b>2026<sup>(b)</sup></b>
0-4	605.5	605.5	605.5	605.5
5-14	285.7	285.7	285.7	285.7
15-24	180.1	180.1	180.1	180.1
25-34	185.6	185.6	185.6	185.6
35-44	347.3	347.3	347.3	347.3
45-54	768.4	768.4	768.4	768.4
55-59	1209.7	1209.7	1209.7	1209.7
60-64	1523.2	1523.2	1523.2	1523.2
65-69	1948.6	1948.6	1948.6	1948.6
70+	2138.1	2138.1	2138.1	2138.1
<b>Overall<sup>10</sup></b>	<b>705.9</b>	<b>787.9</b>	<b>842.1</b>	<b>892.0</b>

<sup>(a)</sup> Actual utilization rates

<sup>(b)</sup> Projected utilization rates

<sup>10</sup> Due to the change in demographic structure, the projected overall utilization rate for 2016, 2021 and 2026 are projected to increase as compared with base year despite that the same age-specific utilization rates are used in calculation.



**Table 1.6 - Actual and projected age-specific community nursing service home visits per '000 population in 2008, 2016, 2021 and 2026**

<b>Age Group</b>	<b>2008<sup>(a)</sup></b>	<b>2016<sup>(b)</sup></b>	<b>2021<sup>(b)</sup></b>	<b>2026<sup>(b)</sup></b>
0-4	<10	<10	<10	<10
5-14	<10	<10	<10	<10
15-24	<10	<10	<10	<10
25-34	<10	<10	<10	<10
35-44	12.8	12.8	12.8	12.8
45-54	26.0	26.0	26.0	26.0
55-59	56.7	56.7	56.7	56.7
60-64	96.3	96.3	96.3	96.3
65-69	172.4	172.4	172.4	172.4
70+	958.7	958.7	958.7	958.7
<b>Overall<sup>11</sup></b>	<b>112.0</b>	<b>122.2</b>	<b>142.8</b>	<b>169.1</b>

<sup>(a)</sup> Actual utilization rates

<sup>(b)</sup> Projected utilization rates

<sup>11</sup> Due to the change in demographic structure, the projected overall utilization rate for 2016, 2021 and 2026 are projected to increase as compared with base year despite that the same age-specific utilization rates are used in calculation.

**Table 1.7 - Actual and projected psychiatric outreach attendances per '000 population in 2008, 2016, 2021 and 2026<sup>12</sup>**

	2008 <sup>(a)</sup>	2016 <sup>(b)</sup>	2021 <sup>(b)</sup>	2026 <sup>(b)</sup>
<b>Overall</b>	<b>25.4</b>	<b>38.3</b>	<b>38.8</b>	<b>40.0</b>

<sup>(a)</sup> Actual utilization rates

<sup>(b)</sup> Projected utilization rates

<sup>12</sup> Age-specific breakdown is not provided in the above as HA uses a methodology that does not have age group categorization to project psychiatric patients and associated workload.

**Table 2 - Projection Parameters on Average Doctor Time Required per Unit of Workload<sup>13</sup>**

	<b>Average Doctor Time Required (in minute) per Unit of Workload</b>
Inpatient:	
- Admission	6 ~ 56
- Bed day occupied	6 ~ 90
Day-patient admission	15 ~ 60
Operation & procedure	45 ~ 980
Specialist outpatient attendance	First consultation: 18 ~ 45 Follow up: 8 ~ 25

<sup>13</sup> The projection model only includes major specialties such as medicine, surgery, gynaecology, paediatrics and ophthalmology.



**Table 3 - Actual and projected HA services workload in 2008, 2016, 2021 and 2026**

**Inpatient Services**

**Acute Care for General Specialties<sup>14</sup>**

	<b>2008<sup>(a)</sup></b>	<b>2016<sup>(b)</sup></b>	<b>2021<sup>(b)</sup></b>	<b>2026<sup>(b)</sup></b>
No. of inpatient bed days occupied	3,951,100	3,977,600	3,956,000	4,034,100
No. of day-patient discharges and deaths	351,000	468,100	584,900	712,300

<sup>(a)</sup> Actual service workload

<sup>(b)</sup> Projected service workload

**Extended Care for General Specialties<sup>15</sup>**

	<b>2008<sup>(a)</sup></b>	<b>2016<sup>(b)</sup></b>	<b>2021<sup>(b)</sup></b>	<b>2026<sup>(b)</sup></b>
No. of inpatient bed days occupied	1,424,000	1,680,800	1,815,000	2,108,200

<sup>(a)</sup> Actual service workload

<sup>(b)</sup> Projected service workload

**Psychiatry Specialty**

	<b>2008<sup>(a)</sup></b>	<b>2016<sup>(b)</sup></b>	<b>2021<sup>(b)</sup></b>	<b>2026<sup>(b)</sup></b>
No. of inpatient bed days occupied	1,002,400	1,061,400	1,125,900	1,183,300

<sup>(a)</sup> Actual service workload

<sup>(b)</sup> Projected service workload

<sup>14</sup> The projection model only includes major specialties such as medicine, surgery, gynaecology, paediatrics and ophthalmology. Some specialties such as anesthesiology are not included in the projection model.

<sup>15</sup> Excluding Central Infirmary Waiting List (elders and/or disabled persons with chronic illnesses and who have reached the stage at which active and intensive medical treatment cannot reverse their health conditions, and are in need of continuous medical and nursing care on top of the total dependency on their activities of daily living may apply for HA's General Infirmary Service. Eligible applicant will be put on the Central Infirmary Waiting List for placement in infirmary beds).

### **Operations, Deliveries and Ambulatory Services**

	<b>2008<sup>(a)</sup></b>	<b>2016<sup>(b)</sup></b>	<b>2021<sup>(b)</sup></b>	<b>2026<sup>(b)</sup></b>
No. of operations (inpatient & day-patient)	149,600	174,100	191,200	211,000
No. of deliveries	41,000	40,700	42,000	41,200
No. of accident & emergency attendances	2,115,600	2,362,600	2,538,200	2,727,400
No. of specialist outpatient attendances				
– General specialties other than psychiatry specialty	5,226,200	6,106,100	6,753,800	7,413,900
– Psychiatry specialty	643,600	776,400	842,100	905,200
No. of general outpatient attendances	4,925,700	5,869,700	6,555,100	7,219,600
No. of psychiatric outreach attendances	177,500	285,200	302,400	323,800

<sup>(a)</sup> Actual service workload

<sup>(b)</sup> Projected service workload

**Table 4 – Projection parameter on total work hours per doctor per year**

<b>Total work hours (net of lunch hour) per doctor per year</b>	<b>Specialty</b>
1,650 ~ 2,120	Accident and Emergency, Pathology, Family Medicine, Psychiatry
2,120 ~ 2,330	Ophthalmology, Radiology, Anesthesiology
2,330 ~ 2,540	Clinical Oncology, Ear, Nose and Throat, Medicine, Neurosurgery, Obstetrics & Gynaecology, Orthopedics, Paediatric, Surgery



**Table 1 - Actual and projected HA service workload by service setting for the general nursing stream in 2008, 2016, 2021, 2026**

	2008 <sup>(a)</sup>	2016 <sup>(b)</sup>	2021 <sup>(b)</sup>	2026 <sup>(b)</sup>
No. of inpatient bed days occupied				
- Acute care for general specialties <sup>1</sup>	3,951,100	3,977,600	3,956,000	4,034,100
- Extended care for general specialties <sup>2</sup>	1,424,000	1,680,800	1,815,000	2,108,200
No. of day-patient discharges & deaths				
- Acute care for general specialties <sup>3</sup>	351,000	468,100	584,900	712,300
No. of specialist outpatient attendances	5,226,200	6,106,100	6,753,800	7,413,900
No. of general outpatient attendances	4,925,700	5,869,700	6,555,100	7,219,600
No. of accident & emergency attendances	2,115,600	2,362,600	2,538,200	2,727,400
No. of operations (inpatient & day-patient)	149,600	174,100	191,200	211,000
No. of deliveries	41,000	40,700	42,000	41,200
No. of community nursing service home visits	781,400	999,200	1,148,600	1,334,200

<sup>(a)</sup> Actual service workload

<sup>(b)</sup> Projected service workload

<sup>1</sup> The projection model only includes major specialties such as medicine, surgery, gynaecology, paediatrics and ophthalmology. Some specialties such as anaesthesiology are not included in the projection model.

<sup>2</sup> Excluding Central Infirmary Waiting List (elders and/or disabled persons with chronic illnesses and who have reached the stage at which active and intensive medical treatment cannot reverse their health conditions, and are in need of continuous medical and nursing care on top of the total dependency on their activities of daily living may apply for HA's General Infirmary Service. Eligible applicant will be put on the Central Infirmary Waiting List for placement in infirmary beds).

<sup>3</sup> The projection model only includes major specialties such as medicine, surgery, gynaecology, paediatrics and ophthalmology. Some specialties such as anaesthesiology are not included in the projection model. For Extended Care for General Specialties, their day-patient discharges are negligible and is therefore assumed nil under the demand projections.

**Table 2 - Actual and projected HA service workload by service setting for the psychiatric nursing stream in 2008, 2016, 2021, 2026**

	<b>2008<sup>(a)</sup></b>	<b>2016<sup>(b)</sup></b>	<b>2021<sup>(b)</sup></b>	<b>2026<sup>(b)</sup></b>
No. of inpatient bed days occupied	1,002,400	1,061,400	1,125,900	1,183,300
No. of specialist outpatient attendances	643,600	776,400	842,100	905,200
No. of psychiatric outreach attendances	177,500	285,200	302,400	323,800

<sup>(a)</sup> Actual service workload

<sup>(b)</sup> Projected service workload

**Table 3 - Projection parameters on ward-based setting for the general nursing stream- acute ward**

	No. of beds per ward	Assumed average daily no. of occupied bed day	Assumed total no. of occupied bed day in a year	Distribution of total no. of occupied bed days by Patient Nurse Dependency (PND)				Total work hours (net of lunch hour) per nurse per year	Required no. of Nurses <sup>(a)</sup>	
				PND I (lowest)	PND II	PND III	PND IV (highest)		Normal Scenario	Busy Scenario <sup>(b)</sup>
Acute medical stream	40	34	12,400	26%	32%	22%	20%	1,770	22.3	25.3
Acute surgical stream	40	34	12,400	25%	35%	24%	16%	1,770	22.1	25.1
Mixed Ward	40	34	12,400	25%	34%	23%	18%	1,770	22.2	25.2

<sup>(a)</sup> After taking into account the rest day and annual leave

<sup>(b)</sup> Add 15% busy loading for wards with more than 17 patients Admission/ Discharge/ Transfer (ADT) per day and 50% turnover of patients against bed day occupied (BDO)



**Table 4 - Projection parameters on ward-based setting for the psychiatric nursing stream**

	<b>No. of beds per ward</b>	<b>Assumed average daily no. of occupied bed day</b>	<b>Assumed total no. of occupied bed day in a year</b>	<b>Total work hours (net of lunch hour) per nurse per year</b>	<b>Required no. of Nurses<sup>(a)</sup></b>
Psychiatric ward	40	34	12,400	1,770	15 - 18

<sup>(a)</sup> After taking into account the rest day and annual leave

**Table 1 Public primary care service: throughput and doctor strength****Number of primary care attendances**

	1998/99	1999/00	2000/01	2001/02	2002/03
<b>Department of Health<sup>(a)</sup></b>	5,718,000	5,984,967	5,948,638	5,765,703	5,551,028

**Number of doctors (as at 31 March)**

	1999	2000	2001	2002	2003
<b>Department of Health<sup>(b)</sup></b>	244	244	237	216	180

## Notes:

- (a) Attendance figures for Department of Health (DH) include general out-patient attendances in general outpatient clinics (GOPCs), Families Clinics and the Education and Training Centre in Family Medicine at Ngau Tau Kok Jockey Club Clinic under DH. Attendance figures cover doctor consultations, injections, dressings and accident and emergency services. Starting from July 2003, all GOPCs under DH have been transferred to Hospital Authority (HA).
- (b) Figures only include the establishment of the Medical and Health Officer grade in GOPCs, DH Families Clinics and the Education and Training Centre in Family Medicine at Ngau Tau Kok Jockey Club Clinic. Figures do not include contract or temporary staff. Starting from 2001/02, GOPCs under DH were being transferred to HA for management and hence the number of doctors decreased. Starting from July 2003, all GOPCs under DH have been transferred to HA for management.

**Table 2 Hospital Authority Service Throughput and Doctor Manpower Figures<sup>1</sup> (1998/99 to 2010/11)**

	1998/99	1999/00	2000/01	2001/02	2002/03	2003/04	2004/05	2005/06	2006/07	2007/08	2008/09	2009/10	2010/11
Hong Kong Population <sup>2</sup> ('000)	6,544	6,607	6,665	6,714	6,744	6,731	6,784	6,813	6,857	6,916	6,958	6,973	7,024
<b>No. of inpatient discharges and deaths<sup>3</sup> ('000)</b>													
- General (acute and convalescence)	806	841	864	882	866	721	836	825	845	879	890	929	962
- Infirmary			3.4	3.8	4.2	4.5	3.5	3.6	3.9	4.1	3.3	3.3	3.7
- Mentally ill	11.9	12.5	13.6	13.4	13.8	13.4	14.9	15.2	16.0	15.8	15.5	16.0	15.9
- Mentally handicapped	0.4	0.5	0.5	0.5	0.5	0.4	0.5	0.5	0.4	0.3	0.3	0.3	0.4
Overall	818	854	882	900	884	739	855	844	866	899	910	948	982
<b>No. of inpatient bed days occupied<sup>3</sup> ('000)</b>													
- General (acute and convalescence)	6,031 <sup>&amp;</sup>	6,310 <sup>&amp;</sup>	5,703 <sup>&amp;</sup>	5,769	5,646	4,694	5,274	5,230	5,220	5,325	5,293	5,314	5,442
- Infirmary			652 <sup>&amp;</sup>	667	713	632	568	543	547	555	525	520	520
- Mentally ill	1,658 <sup>&amp;</sup>	1,631 <sup>&amp;</sup>	1,596 <sup>&amp;</sup>	1,437	1,393	1,324	1,276	1,196	1,122	1,042	988	1,010	1,025
- Mentally handicapped	259 <sup>&amp;</sup>	257 <sup>&amp;</sup>	257 <sup>&amp;</sup>	258	258	255	248	240	237	232	227	222	215
Overall	7,948 <sup>&amp;</sup>	8,197 <sup>&amp;</sup>	8,208 <sup>&amp;</sup>	8,132	8,009	6,905	7,365	7,210	7,126	7,153	7,034	7,067	7,203
<b>Inpatient average length of stay<sup>3</sup> (days)</b>													
- General (acute and convalescence)	7.3	7.3	6.6	6.6	6.6	6.7	6.3	6.4	6.2	6.0	6.0	5.8	5.7
- Infirmary			112	120	148	175	120	108	122	114	132	135	123
- Mentally ill	155	150	179	140	117	100	105	93	104	101	79	74	73
- Mentally handicapped	405	347	327	329	403	622	624	454	732	674	569	838	616
Overall	9.7	9.7	10.0	9.3	9.3	9.9	8.9	8.7	8.9	8.5	8.0	7.7	7.5
No. of day patient discharges and deaths ('000)	235 <sup>&amp;</sup>	251 <sup>&amp;</sup>	284 <sup>&amp;</sup>	308	314	236	271	281	290	326	365	417	460
No. of specialist outpatient (clinical) attendances <sup>4</sup> ('000)	5,338	5,487	5,775	5,944	6,079	5,487	5,834	5,840	5,808	5,912	6,071	6,392	6,630
No. of accident & emergency attendances ('000)	2,361	2,407	2,403	2,523	2,380	1,829	2,101	2,019	2,053	2,088	2,117	2,214	2,237
No. of geriatric outreach attendances ('000)	63	164	259	342	401	384	474	529	533	543	555	626	620
No. of inpatient ultra-major & major operations* ('000)	77	83	89	90	91	94	108	109	110	112	115	123	134



	1998/99	1999/00	2000/01	2001/02	2002/03	2003/04	2004/05	2005/06	2006/07	2007/08	2008/09	2009/10	2010/11
No. of radiology examinations* ('000)	3,009	3,144	3,272	3,448	3,443	3,247	3,488	3,506	3,572	3,641	3,767	3,925	4,036
No. of pathology workload units* ('000 000)	132	138	143	147	150	146	156	165	168	177	187	208	208
<b>Manpower: Medical<sup>6</sup></b> (as at 31 March)													
- Doctor	3,491	3,674	3,894	4,105	4,279	4,542	4,526	4,569	4,617	4,722	4,863	4,995	5,052
- Intern / Extern	334	314	330	351	333	325	328	325	313	329	292	277	280
- Dentist	4	5	5	5	5	5	5	5	6	6	5	6	5
<b>Medical Total</b>	<b>3,829</b>	<b>3,993</b>	<b>4,229</b>	<b>4,461</b>	<b>4,617</b>	<b>4,872</b>	<b>4,859</b>	<b>4,899</b>	<b>4,936</b>	<b>5,057</b>	<b>5,160</b>	<b>5,278</b>	<b>5,337</b>

Notes:

1. Source: The figures are sourced from Controlling Officer's Report (COR), other than those data items (i.e. no. of operations, radiology examinations and pathology workload units) marked with asterisks (\*) which are sourced from administrative records. Figures marked with ampersand (&) were presented under different categorisation in the COR at that time. In the above table, figures are presented following the categories in the COR from 2001-02 and onwards for comparison purpose. The number of primary care attendances of DH is provided in Table 1 above, and the number of primary care attendances of HA was provided in Appendix I in the Administration's response to the issues raised at the Legislative Council Panel on Health Services Subcommittee on Health Protection Scheme meetings on 16 April and 30 April 2012 dated 17 May 2012 (LC Paper No.CB(2)2011/11-12(01)).
2. Source: Census & Statistics Department (May 2012, from Census & Statistics Department website).
3. Exclude day patient.
4. Starting from 2000/01 and 2007/08, the number of specialist outpatient (clinical) attendances in the COR no longer covers the number of allied health (outpatient) attendances and family medicine specialist clinic (FMSC) attendances respectively. Thereafter, these two are listed separately as new indicators. For comparison purpose, all the figures presented in the above table exclude the number of allied health (outpatient) attendances and FMSC attendances.
5. To facilitate comparison, the manpower figures are on full time equivalent (FTE) basis which include all staff in HA's workforce (i.e. permanent, contract and temporary staff).