



1. Introduction

1.1 In Hong Kong, there has been a high demand for public accident and emergency ("A&E") services provided by the Hospital Authority ("HA") and the emergency ambulance service ("EAS") provided by the Fire Services Department ("FSD"). Notwithstanding the measures adopted by HA to address the demand for services, the average waiting time for A&E services among semi-urgent and non-urgent patients has been increasing. Besides, there have been concerns about the deployment of EAS resources as the same service standard is adopted for all patients without regard to the urgency of their needs.

1.2 Many overseas places have faced similar issues related to heavy demand for emergency care services in their healthcare system and therefore have adopted various strategies and measures for addressing those issues. For example, New South Wales ("NSW") of Australia and England of the United Kingdom ("UK")¹ have implemented a diverse range of measures in recent years for managing the demand for public emergency care services, fine-tuning the patient flow, and/or improving capacity planning for A&E and inpatient services in public hospitals in order to cope with the increasing service demand. In 2016-2017, NSW had attained the best performance among all states and territories in Australia in terms of the percentage of patients receiving treatment within the recommended maximum waiting time for all triage categories. National Health Service in England ("NHS")² has managed to maintain its service level in terms of meeting the four-hour total time standard (i.e. admitting, transferring or discharging the patients within four hours of arrival at the A&E departments) in the past two years amid the increase in service demand.

¹ Similar to Hong Kong, emergency care services in NSW and England are largely provided in the public healthcare sector.

² NHS consists of the publicly funded healthcare systems in the respective nations in the UK. NHS in this Information Note refers to NHS in England.

1.3 At the request of Dr Honorable Pierre CHAN, the Research Office has prepared this information note aiming to examine the policy on provision of emergency care services in NSW and England, covering information on (a) the services offered and resources involved; (b) the strategies and measures adopted to manage the demand and provision of services amid the high demand challenge; and (c) their implementation experiences and outcomes. The salient features of the services offered and policy measures implemented in Hong Kong, NSW and England are summarized in the **Appendix**.

2. Emergency care services in Hong Kong

2.1 Over the past decade, there had been an increase in healthcare service demand amidst population growth and ageing with growing burden of chronic diseases. Statistics of the Census and Statistics Department indicated that compared to 10 years ago, the tendency of people visiting public outpatient clinics/hospitals had increased, while the tendency of consulting private medical practitioners decreased. Partly due to demographic changes, the demand for public emergency care services has also risen, particularly among those aged 65 and above (**Figure 1**).

2.2 The high and rising demand for A&E services is generally considered attributable to the **convenience and accessibility of A&E departments** and a **lack of access to primary healthcare services and a shortage of out-of-hours services**.³ Indeed, with the extension of emergency care services to new towns in recent years, the number of public hospitals providing 24-hour A&E services has grown from 16 in 2008-2009 to 18 in 2017-2018. On the other hand, albeit HA's effort to extend service hours, over 80% of general outpatient public clinics do not provide services on Sundays and public holidays, while just about 32% provide weekday evening service until 10 pm. As for private outpatient clinics, provision of services in evening/midnight tends to be limited.

³ See Lee, A. (2007) and Organisation for Economic Co-operation and Development (2015).

Figure 1 – Changes in the Hong Kong population and usage and demand for healthcare services

	2008	2017	Change
Population			
• Mid-year population	6 957 800	7 391 700	+ 6%
- Population aged 65 and above	882 700	1 214 600	+ 38%
• Life expectancy at birth for males	79.4 years	81.9 years	+ 2.5 years
• Life expectancy at birth for females	85.5 years	87.6 years	+ 2.1 years
Health condition of the population			
• Persons with chronic health conditions	24.6%	28.4%	+ 3.8 percentage points
Usage of healthcare services			
• Doctor consultation in private Western medicine clinics ⁽¹⁾	56.6%	49.5%	- 7.1 percentage points
• Doctor consultation in public Western medicine clinics ⁽¹⁾	27.5%	29.2%	+ 1.7 percentage points
• No. of primary care attendances at public hospitals ⁽²⁾	5 204 132	6 393 364	+ 23%
• No. of A&E attendances at public hospitals ⁽²⁾	2 116 509 (304 per 1 000 population)	2 189 040 (296 per 1 000 population)	+ 3%
- No. of A&E attendances among persons aged 65 and above ⁽²⁾	567 037	668 464	+ 18%

Notes: (1) Figures refer to the proportion of the last three consultations made by the surveyed respondents during the 30 days before enumeration.

(2) The figures were recorded in the respective financial years.

Sources: Annual Reports of the Hospital Authority (various years), Census and Statistics Department (2018) and Census and Statistics Department (various years).

2.3 Limited out-of-hours services might have driven part of the demand to the public A&E departments. Although the number of **non-urgent and semi-urgent attendances (i.e. Triage 4 and Triage 5)**⁴ had seen a mild drop compared to 2008-2009, they **remained the greatest share of A&E attendances**, accounting for over 60% in 2017-2018 (**Figure 2**). During the period, cases of critical, emergency and urgent nature (i.e. Triage 1 to Triage 3) that required more complicated and speedy treatment had increased markedly, posing added pressure on strengthening A&E resources. According to HA, the cost per A&E attendance was HK\$1,390 in 2017-2018.⁵

Figure 2 — Number of accident and emergency attendances by triage categories

	2008-2009		2017-2018		Change in no. of attendances
	No.	%	No.	%	
Total no. of attendances	2 116 509	100.0%	2 189 040	100.0%	+ 3%
Total no. of first attendances	2 036 985	96.2%	2 123 530	97.0%	+ 4%
Total no. of follow-up attendances	79 524	3.8%	65 510	3.0%	- 18%
Breakdown of first attendances by triage category					
- Triage 1 (critical cases)	18 325	0.9%	22 144	1.0%	+ 21%
- Triage 2 (emergency cases)	34 632	1.7%	52 111	2.5%	+ 50%
- Triage 3 (urgent cases)	592 963	29.1%	749 179	35.3%	+ 26%
Total Triage 1 to Triage 3 cases	645 920	31.7%	823 434	38.8%	+ 27%
- Triage 4 and Triage 5 (semi-urgent and non-urgent cases)	1 391 065	68.3%	1 300 096	61.2%	- 7%

Sources: Food and Health Bureau (2010) and Annual Reports of the Hospital Authority (various years).

⁴ Triage carried out by the A&E departments aims to ensure that patients with more serious conditions are accorded higher priority in medical treatment.

⁵ The cost per A&E attendance was higher than that per general outpatient attendance and specialist outpatient attendance which stood at HK\$470 and HK\$1,230 respectively in 2017-2018.

Emergency ambulance service provided by the Fire Services Department

2.4 FSD is tasked with providing pre-hospital treatment for patients requiring prompt medical attention and subsequent conveyance of the patients to public hospital as soon as possible. In the decade between 2008 and 2017, the number of emergency calls handled by FSD⁶ had increased by 22% to 734 310. In 2017, FSD conveyed a total of 705 681 casualties or patients to hospitals or clinics, including responses to both emergency calls and hospital transfer calls.⁷ According to an earlier review conducted by the Audit Commission in 2008, on average, patients conveyed by ambulances to the A&E departments accounted for about 20% of the total A&E attendances in public hospitals. Of these cases, **40.5% were neither urgent nor emergency cases.**⁸

2.5 While it is not clear whether FSD has any arrangement of treating non-emergency cases at the scene without conveying the patients to hospital, FSD had indeed conducted a public consultation on a proposal to introduce a **medical priority dispatch system** for EAS in 2009, with an aim to prioritize the response to emergency ambulance calls in accordance with the degree of urgency such that priority emergency assistance could be provided to patients in critical need. While the public indicated general support for the principles and broad framework of the proposed system,⁹ the Government has not indicated whether it would pursue it in the long run.¹⁰

⁶ The Hong Kong St. John Ambulance Brigade ("St. John Ambulance") also provides free EAS while HA, the Auxiliary Medical Services and St. John Ambulance provide non-emergency ambulance transfer service for patients who require transport service to and from medical institutions.

⁷ In 2017, FSD handled about 50 000 hospital transfer calls which involved the transfer of patients from a hospital or medical institution to another for emergency treatment.

⁸ They were classified as semi-urgent (Triage 4), non-urgent (Triage 5) or unclassified cases. See Audit Commission (2008) and Annual Reports of the Hospital Authority (various years). The Research Office has written to HA to enquire about the latest figures. According to the reply furnished by HA on 21 December 2018, HA does not have the updated complete statistics on the number of A&E attendances conveyed by ambulances.

⁹ See Security Bureau and Fire Services Department (2010).

¹⁰ FSD has instead enhanced EAS by launching the post-dispatch advice service in May 2011, with the recent extension of the service to over 30 types of injuries and sicknesses. The post-dispatch advice service provides appropriate advice to EAS callers for the common types of injuries and illnesses to assist them in stabilizing patients' conditions before the arrival of an ambulance.

2.6 Unlike some other places imposing a charge on all users or certain classes of users, EAS in Hong Kong is provided entirely free of charge. To cope with the increasing demand on EAS, over the past decade, government funding allocated to FSD for the provision of ambulance service had increased markedly by 85% to HK\$1,768 million in 2017-2018 for the expansion of manpower and ambulance fleet.¹¹ While patients calling EAS are likely of varying degree of emergency, FSD has exceeded the performance target of answering 92.5% of the emergency calls within 12 minutes from the time of call to the arrival of an ambulance at the street address.¹²

Measures adopted to cope with the high demand for A&E services

2.7 While FSD has met the growth in service demand for EAS by expanding its capacity, high service pressure on the part of A&E services is of concern. Over the past few years, HA has adopted various measures to cope with the high demand for A&E services, including setting up a Task Force on Service Demand Surge¹³ to develop and implement a response plan to manage growing service demand during winter surge periods. A major strategy adopted is to **strengthen the medical, nursing and supporting staff manpower**¹⁴ through measures such as (a) retaining medical and nursing staff by enhancing their career prospects; (b) recruiting additional medical and nursing staff to handle semi-urgent (Triage 4) and non-urgent (Triage 5) cases under the A&E Support Session Programme;¹⁵ and (c) recruiting part-time and temporary staff, including rehiring retired staff. As at end-2017, there were 487 doctors¹⁶ (0.07 per 1 000 population) and 1 134 nurses (0.15 per

¹¹ FSD had increased the workforce of the ambulance stream by 28% to 2 962 between 2008 and 2017, and increased the number of ambulances from 243 to 375 during the period. See Security Bureau (various years), Fire Services Department (2019) and GovHK (2018a).

¹² In 2017, 95.1% of the emergency calls were answered within the 12-minute target.

¹³ The Task Force, comprising representatives of HA head office and clusters, is also responsible for reviewing the strategy and response plan for service demand surge, proposing enhanced measures and coordinating step-up measures when service demand increases significantly. According to HA, it monitors the daily service statistics of all acute hospitals during the winter surge period so as to timely implement measures under the response plan. It also reviews the service demand situation and response measures on a weekly basis.

¹⁴ The overall attrition rate of full-time doctors in HA reached 5.9% in 2017, with a higher than average rate of 6.3% recorded for the accident and emergency specialty.

¹⁵ HA has implemented the A&E Support Session Programme since 2013 to recruit additional medical and nursing staff to work extra hours on a voluntary basis with payment of special honorarium.

¹⁶ According to HA, about 55% of the doctors employed in the A&E specialty have obtained the fellowship qualification in emergency medicine.

1 000 population) working in the A&E departments of public hospitals,¹⁷ up by about 11% for doctors and 18% for nurses compared with the manpower strength as at end-March 2014.

2.8 Since June 2017, HA has **revised up the charges** for A&E services. The current service charge for A&E services is HK\$180 per attendance for Hong Kong residents and HK\$1,230 per attendance for non-residents.¹⁸ HA has also strived to **manage the demand** for A&E services, particularly during the **influenza winter surge**, by various means such as enhancing outreach service support for residential care homes for the elderly, and appealing to private doctors via Hong Kong Medical Association and Chinese medical practitioners to provide services during long holidays.

2.9 With about one-third of A&E patients admitted to hospitals,¹⁹ HA has also sought to **reduce avoidable hospitalization** by, among others, enhancing geriatrics support to the A&E departments to provide rapid geriatric on-site assessment and alternative management options to elderly patients, and enhancing virology services to facilitate and expedite patient management decision. In addition, HA has sought to **improve patient flow** by speeding up transfer of stable patients from acute hospital to convalescent hospital, and enhancing ward rounds by senior doctors²⁰ during evenings, weekends and public holidays to facilitate discharge of patients.

Recent developments

2.10 Notwithstanding the above-mentioned measures adopted to address the service demand issues, HA had **failed to meet the waiting time target for urgent (Triage 3) and semi-urgent (Triage 4) cases since 2012-2013 (Figure 3)**.²¹ This might probably be due to prioritization of more resources to deal with the rising number of critical (Triage 1) and emergency (Triage 2) cases. The 2016 Patient Experience and Satisfaction Survey on Accident and

¹⁷ The manpower figures are calculated on full-time equivalent basis including permanent, contract and temporary staff but excluding interns and dental officers.

¹⁸ Before June 2017, the service charge for A&E services was \$100 per attendance for Hong Kong residents and \$990 per attendance for non-residents.

¹⁹ See Hospital Authority (2018).

²⁰ In 2017, the attrition rates of the consultant and senior medical officer/associate consultant ranks were 8.4% and 7.2% respectively which were higher than the overall attrition rate of 5.9%. These two ranks of medical staff accounted for about 14% and 31% of the total number of medical staff in HA respectively.

²¹ HA has not set a waiting time target for non-urgent (Triage 5) patients.

Emergency Service commissioned by HA revealed that patients' average rating on their overall waiting time experience (6.5 out of a scale of 0 to 10) was visibly lower than the average rating on the overall experience with the A&E departments (7.7).²² In addition, the overcrowding and access block²³ issues in the A&E departments of public hospitals have particularly been serious during the influenza winter surge.²⁴ According to HA, most hospitals' medical inpatient bed occupancy rate was over 100% during the winter surge in early 2019 and some even reached 125%. In order to alleviate the demand pressure faced by A&E departments, particularly during winter surge, there have been calls for HA to step up the efforts to increase the hospital capacity and optimize A&E services.²⁵

Figure 3 — Percentage of patients seen within target waiting time

Triage category	Target Waiting Time ⁽¹⁾	2008-2009	2011-2012	2014-2015	2017-2018
Triage 1 (critical cases)	100% with immediate treatment	100%	100%	100%	100%
Triage 2 (emergency cases)	95% seen within 15 minutes	98%	98%	97%	97%
Triage 3 (urgent cases)	90% seen within 30 minutes	89%	91%	75%	76%
Triage 4 (semi-urgent cases)	75% seen within 120 minutes	Not available	80%	66%	66%

Note: (1) Waiting time refers to patient's waiting time from registration to treatment. HA has set performance pledges on the waiting time for the treatment of patients in the Triage 1 to Triage 3 categories (i.e. critical, emergency and urgent cases).

Sources: Hospital Authority (2018) and Annual Reports of the Hospital Authority (various years).

²² See Hospital Authority (2017).

²³ Access block refers to the delay caused for patients in gaining access to inpatient beds after being admitted.

²⁴ The number of critical (Triage 1) and emergency (Triage 2) cases handled by the A&E departments generally increase between January and March of each year (i.e. during the influenza winter surge). For example, in 2016-2017, the average number of critical (Triage 1) and emergency (Triage 2) cases handled per month between April and December 2016 was about 5 500 cases while the average between January and March 2017 was about 6 200 cases. See Food and Health Bureau (2018).

²⁵ See Legislative Council Secretariat (2018b).

3. Global trend on provision of emergency care services

3.1 According to the Organisation for Economic Co-operation and Development ("OECD") and some academics,²⁶ overseas places had generally adopted two major approaches to cope with the rising demand for A&E services, namely: (a) developing interventions to **reduce the overall demand for emergency care**; and (b) setting up mechanisms to **improve pathways of care**. Policy options taken by overseas places to reduce service demand include (a) developing out-of-hours primary care services and community health centres to substitute emergency care services; (b) adopting telemedicine for providing teleconsultation and facilitating self-management for chronic diseases; (c) providing alternative sites of primary care for non-urgent cases such as minor injury units and walk-in centres, which are located outside or within hospitals next to A&E departments; and (d) introducing cost sharing for the use of emergency care services.

3.2 Regarding the approach to improving the pathways of care, measures introduced in overseas places include: (a) introducing fast-track systems to redirect non-urgent patients to more appropriate ambulatory settings;²⁷ (b) involving primary care doctors in A&E departments to provide care for non-urgent patients; (c) allocating similar patients (e.g. nature of illness) to a particular work stream for assessment and treatment (the process is commonly known as streaming); and (d) introducing point-of-care testing which provides rapid results for commonly ordered laboratory testing to reduce the time for diagnosis.

3.3 With regard to EAS, many places including the UK, Australia, the United States ("US"), Canada, Germany and Singapore have adopted a triage system to prioritize ambulance calls for effective allocation of resources to respond to users according to urgency of their needs. Yet, there is variation among overseas places in their service fee policy for public EAS. While some places such as the US and some states in Australia impose charges on all users of EAS, Singapore only imposes a fee on non-emergency users. In the UK, it is free for anyone to use public EAS.

²⁶ See Organisation for Economic Co-operation and Development (2015), Jarvis, P. R. (2016) and Yarmohammadian, M. H. et al. (2017).

²⁷ According to OECD, a fast-track system prevents the inappropriate use of emergency care by treating patients with non-urgent conditions in a dedicated area where professionals have the competence to make a discharge decision.

4. Emergency care services in New South Wales of Australia

4.1 In NSW, Emergency Departments ("EDs") of public hospitals are the primary providers of emergency care services for patients requiring urgent medical attention. Provided free of charge, the service is offered in 176 public hospitals in NSW, representing about 78% of all public hospitals in the state. Due to population growth, ageing and increased incidence of patients with chronic diseases, the number of attendances in EDs increased significantly by about 43% from 2.0 million in 2008-2009 to 2.9 million in 2017-2018 (359 per 1 000 population). People having medical emergency will be taken by ambulance to hospital upon calling and the service is provided at a charge.

Emergency ambulance service

4.2 In NSW, public EAS is provided by NSW Ambulance which has a workforce of over 4 500 staff and a fleet of about 1 000 ambulances.²⁸ NSW Ambulance has adopted a **medical priority dispatch system** to determine the level of response required based on the severity of the patient's condition. Calls are prioritized into (a) emergency/life-threatening (P1) cases requiring immediate/emergency response; (b) urgent but not life-threatening (P2) cases requiring urgent response; (c) time-critical (P3) cases requiring undelayed response; and (d) non-emergency (P4-P9) cases. In 2017-2018, NSW Ambulance responded to 1.16 million emergency calls (147 per 1 000 population), slightly up by 3% from 1.12 million in 2008-2009. Based on all the responses involving vehicle dispatch in 2017-2018, 45% were emergency/life-threatening (P1) cases, 46% were urgent but not life-threatening (P2) cases and 9% were other less urgent cases.

²⁸ Other organizations such as local health districts, community transport organizations and other private and not-for-profit organizations also provide health related transport services.

4.3 As part of the reform of NSW Ambulance to manage service demand and respond to service calls more effectively, the Ministry of Health ("NSW Health") has implemented a "**secondary triage**" initiative since 2012. Under the initiative, calls classified as non-emergency (P4-P9) cases are directed to another hotline centre Healthdirect Australia²⁹ for further assessment by a nurse who will provide health advice and alternative treatment options. The nurse may return the call to the ambulance service call control centre at any time if he or she believes an ambulance is required. In 2016-2017, about 35 000 secondary triage calls were handled, accounting for about 4% of the total number of ambulance calls in that year. NSW Health has also introduced the measure of **treating non-emergency cases at the scene to avoid unnecessary transport to EDs**.

4.4 Different from Hong Kong, EAS in NSW is provided at a fee, comprising a call-out fee and an additional fee per kilometer, subject to a ceiling. Residents are subsidized and charged at the rate of 51% of the cost of service provision³⁰ and those such as pensioners and healthcare concession card holders³¹ are eligible for fee exemption. In 2015-2016, the total costs of the ambulance service, funded by government grants, transport fees and other income, amounted to A\$888.3 million (HK\$5,179 million). According to the annual patient satisfaction survey conducted in 2016-2017,³² 98% of the respondents considered the care they received from the ambulance service as good or very good, reflecting that patients generally accepted the medical priority dispatch system adopted for triaging patients. Despite positive responses from patients, the Audit Office of New South Wales has pointed out that NSW Ambulance had not set key performance indicators for the demand management initiatives and it also lacked a systematic assessment of the initiatives.³³

²⁹ Healthdirect Australia is a 24-hour telephone triage, health advice and information service.

³⁰ For residents, the call-out fee is A\$382 (HK\$2,166) and the additional fee is A\$3.44 (HK\$19.5) per kilometer subject to a ceiling of A\$6,258 (HK\$35,483).

³¹ Healthcare concession card is granted to eligible individuals such as those receiving social welfare payments from the government. Card holders are entitled to obtain health services and medicines at a lower fee.

³² See Bureau of Health Information of NSW (2018).

³³ See Audit Office of New South Wales (2017).

Emergency care services provided by public hospitals

4.5 Similar to Hong Kong, patients attending EDs of NSW public hospitals are triaged into five categories, namely: (a) immediate (Triage 1); (b) emergency (Triage 2); (c) urgent (Triage 3); (d) semi-urgent (Triage 4); or (e) non-urgent (Triage 5). In 2017-2018, 47% of the cases were in the Triage 1 to Triage 3 categories (i.e. immediate, emergency and urgent cases) and 53% were in the Triage 4 and Triage 5 categories (i.e. semi-urgent and non-urgent cases). According to the latest statistics of NSW, the total expenditure on public emergency care services was about A\$1.64 billion (HK\$9.56 billion) (or **A\$600 (HK\$3,500) per attendance**) in 2015-2016.³⁴

4.6 There were about 557 registered doctors specializing in emergency medicine (or 0.07 per 1 000 population) as at end-2017.^{35, 36} To ensure patients to access appropriate hospital care in a timely manner, apart from setting the recommended waiting time for treatment for patients in each category,^{37, 38} NSW Health has also set an **emergency treatment performance ("ETP") target** of admitting, transferring or discharging **81% of the patients attending EDs within four hours**.³⁹ To work toward the target amidst continued growth in service demand, NSW Health has introduced different measures to cope with the service pressure.

³⁴ See Australian Institute of Health and Welfare (2017).

³⁵ According to the Medical Council of Hong Kong, there are about 353 registered specialists in emergency medicine in Hong Kong currently, including those working in the public and private sectors. The doctor-to-population ratio is about 0.047 per 1 000 population which is lower than that in NSW.

³⁶ The Research Office has written to NSW Health to enquire about the number of doctors and nurses working in EDs in public hospitals. As at publication of this information note, NSW Health has yet to furnish a reply.

³⁷ The recommended waiting time for treatment for the five triage categories are: (a) immediately or within two minutes for Triage 1 (immediate) cases; (b) 80% of patients treated within 10 minutes for Triage 2 (emergency) cases; (c) 75% within 30 minutes for Triage 3 (urgent) cases; (d) 70% within 60 minutes for Triage 4 (semi-urgent) cases; and (e) 70% within 120 minutes for Triage 5 (non-urgent) cases.

³⁸ Treatment times for Triage 1 (immediate) cases are generally not recorded and reported as the clinicians are focused on providing immediate and essential care rather than recording times.

³⁹ The ETP target was originally introduced in 2011 as a national target to drive improvement in the quality and timeliness of care provided by EDs as part of an agreement on improving public hospital services between the Commonwealth and State and Territory governments. Upon expiry of the agreement in 2017, individual state and territory governments set performance target in accordance with the local situation.

Measures adopted to cope with the high service demand

4.7 NSW Health has adopted a **whole-of-hospital, patient-oriented approach** in formulating and implementing the strategies to cope with the high service demand in EDs and to improve the service performance. Based on a review of the issues faced by some under-performing hospitals and the experiences of the high-performing hospitals, NSW Health devised in 2011 an action plan for improving performance against the ETP target focusing on various fronts: (a) providing ambulatory care or community-based service alternatives to manage/divert service demand; (b) improving the processes/models of care in EDs; and (c) enhancing the patient flow through better patient care coordination and discharge planning.

4.8 On **managing/diverting ED service demand** with the provision of other care alternatives, hospitals with ED are recommended to adopt diverse measures including: (a) booking ED patients into outpatient/ambulatory care clinic for follow-up care where appropriate; (b) developing care plans for managing patients who visit ED frequently and known patients with chronic disease, and helping them better manage their condition and access appropriate services; and (c) developing "Hospital in the Home" services which provide acute/sub-acute care in the patient's home or the community as a substitute for in-hospital care.⁴⁰

4.9 On **improvements in the pathways of care/emergency care models**, among others, hospitals are recommended to: (a) establish a senior assessment and streaming model of care which enables earlier senior medical assessment of patients, initiation of treatment and disposition decision immediately following triage;⁴¹ (b) maximize the role of the clinical initiatives nurses in initiating diagnostics or treatment according to established protocols;⁴² and (c) identify a pathway for appropriate emergency surgery patients to go home preoperatively with preparation, consent and a plan for

⁴⁰ According to NSW Health, "Hospital in the Home" is clinical care that reduces the length of stay in hospital or avoids admission in some instances. There is evidence that certain conditions can be well managed through clinical care provided at home such as pneumonia and urinary tract infections.

⁴¹ The model is primarily aimed at larger EDs which are well evolved in terms of models of care and have appropriate availability of senior medical staff to support the model. It is a flexible model of care that can operate during peak periods of demand. In a conventional approach, patients are often assessed later in the ED journey by a senior medical officer.

⁴² The clinical initiatives nurse is a senior nursing role in ED managing triaged patients in the waiting room. The nurse may reassess patients following triage and initiate diagnostics or treatment with emphasis on managing patients' pain.

emergency surgery for the next day. Probably due to higher healthcare manpower supply in the system, NSW Health have a higher flexibility to adopt alternative emergency care models for patients to ease the crowding issue when compared to the situation in Hong Kong.

4.10 On **improving patient flow**, NSW Health has placed importance on the implementation of a **patient flow portal** which provides information and user-friendly tools for staff to facilitate more efficient **patient care coordination and discharge planning**. NSW Health has also promoted strategies for weekend discharges; and discharging patients via the **patient discharge lounge** where patients can wait for pick-up to improve access to available beds.

4.11 NSW Health has also devised **demand escalation and capacity plans** for coping with variations in service demand such as during winger surges and long holidays. Unlike the demand and capacity planning mechanism in Hong Kong which is driven by a dedicated task force, NSW has established a system-wide demand escalation and capacity planning system featuring two levels of planning: (a) **capacity action planning** by hospitals to address predicted shortfall in capacity in a timeframe of seven to 10 days to prepare for long weekend or seasonal variation; and (b) **short-term escalation planning** involving the whole hospital to address unpredicted daily shortfall in capacity triggered by indicators such as delayed transfer of care from ED after admission or discharge delay. The system focuses on predicting, preventing and initiating a proactive and planned response to managing demand for capacity mismatches.

Observed outcomes

4.12 Probably due to implementation of the above-mentioned improvement measures in recent years, NSW was the only state achieving the targets on waiting time for treatment across four triage categories in 2016-2017, and has seen gradual improvement in meeting the ETP target from 65% in the second quarter of 2013 to 74% in the first quarter of 2018. Reflecting the improved services, the percentage of patients rating the overall care they received in EDs as very good or good in the annual patient satisfaction survey increased noticeably from 82% in 2013-2014 to 90% in 2016-2017. Nonetheless, there has been variance in performance among individual hospitals in meeting the ETP and targets on patients' waiting time for

treatment. For example, between April and June 2018, some 30 EDs of larger acute hospitals had improved in terms of the percentage of patients who spent four hours or less in ED while some 40 EDs had declined in performance.⁴³

5. Emergency care services in England of the United Kingdom

5.1 In England, its **urgent and emergency care system** not only covers A&E departments and ambulance service, but also other urgent care services including general practitioner ("GP") out-of-hours services, and 24-hour hotline NHS 111.⁴⁴ Attributable to ageing of the population, the demand for emergency care services in England has been rising. This is particularly the case for A&E services which serve as a "safety net" for patients handling a range of health problems in a prompt and reliable manner. In 2017-2018, there were 23.8 million attendances in A&E departments of NHS (428 per 1 000 population), up by 22% compared to 2008-2009.

Emergency ambulance service

5.2 Ambulance service, provided free of charge for all users including non-residents, has been playing a pivotal role as a conduit to other services in the system. Between 2010-2011 and 2015-2016, the number of ambulance calls (including NHS 111 transfers) increased by 32% to 10.7 million (195 per 1 000 population). To cope with the rising service demand, the number of staff in ambulance service has expanded by 7% to 32 400 over the same period.⁴⁵ Apart from strengthening the workforce, NHS has in recent years reviewed the ambulance service⁴⁶ with the introduction of a **new service model** under its Ambulance Response Programme. Fully

⁴³ See Bureau of Health Information of NSW (various years).

⁴⁴ NHS 111 is a 24-hour, free-to-call medical helpline for persons who have an urgent but non-emergent medical concern. The hotline is answered by clinical advisors who are either registered general nurses or paramedics.

⁴⁵ See National Audit Office (2017).

⁴⁶ Under the previous ambulance service model, calls were categorized into "Red 1", "Red 2" and "Green" calls according to their degree of urgency. NHS targeted to respond to 75% of the Red 1 and Red 2 calls within eight minutes. However, the service performance level had deteriorated in recent years in view of the high growth in service demand. Under the new model, the service standard has been revised and set according to the priority of the patient category.

launched in late 2017 after a pilot run,⁴⁷ the initiative features a set of new service standards aimed at improving operational efficiency and enhancing the quality of care for patients by **allowing more time to assess the conditions of patients** and **adopting a more flexible approach in responding to the calls** according to the needs and urgency of patients.

5.3 Under the new service model, calls for ambulance service are categorized into four categories, namely: (a) life-threatening (Category 1) calls; (b) emergency (Category 2) calls; (c) urgent (Category 3) calls; and (d) less urgent (Category 4) calls.⁴⁸ While NHS is required to make a dispatch decision for a life-threatening (Category 1) call within 30 seconds of call connection, it is allowed to have a maximum of 180 seconds to assess a Category 2 to Category 4 call (i.e. an emergency, urgent or less urgent call) in order to reach a more detailed diagnosis and send the most appropriate response. Other changes include **treating urgent (Category 3) patients at the scene instead of conveying them to a hospital** and **giving advice to less urgent (Category 4) patients over the phone or referring them to another service** such as a GP or a pharmacist in some instances. Apart from improving the operational efficiency of the ambulance service, adoption of the new model by NHS also aimed to help manage demand for A&E services because patients will only be **conveyed to hospital when it is clinically necessary.**⁴⁹

5.4 About one year since its launch, NHS has answered about 8.8 million calls under the new service model. For Category 1 life-threatening cases, NHS was close to meeting the dual target of seven-minute average response time from receiving a call to the ambulance arriving at the patient's location and 90th percentile response time within 15 minutes. For Category 2 to Category 4 cases (i.e. emergency, urgent and less urgent cases), there had been improvement in meeting the target in the past year.⁵⁰ Reflecting the enhanced service, the cost of emergency ambulance service provided by NHS

⁴⁷ The evaluation study of the pilot programme conducted an analysis of 14 million calls received during the pilot period and found that the new service model had been effective in enhancing operational efficiency and service performance stability without compromising patient safety as no adverse incident among the service users was recorded during the pilot period. See The University of Sheffield (2017).

⁴⁸ See NHS England (2017a) and NHS England (2019c).

⁴⁹ See NHS England and NHS Improvement (2017).

⁵⁰ For emergency (Category 2) cases, the target is to achieve an average response time of 18 minutes and a 90th percentile response time of 40 minutes. For urgent (Category 3) and less urgent (Category 4) cases, the target is to attain a 90th percentile response time of 120 minutes and 180 minutes respectively. See NHS England (2019b).

amounted to £1.9 billion (HK\$19.1 billion) in 2017-2018, 12% higher than that in 2015-2016 when the new model was yet unveiled.⁵¹

Accident and emergency services

5.5 Unlike Hong Kong and NSW which only have a single level of A&E departments triaging patients according to the severity and nature of their medical conditions, NHS has established three types of emergency care department providing different levels of care for patients, namely: (a) **Type 1 major A&E department** – a consultant led 24-hour service with full resuscitation facilities and designated accommodation for A&E patients; (b) **Type 2 specialty A&E department** – a consultant led single specialty A&E service such as ophthalmology; and (c) **Type 3 A&E department/urgent treatment centre** – a doctor-led centre for treating minor injuries or illnesses that may be co-located with Type 1 A&E department and accessible without appointment. Patients going to a Type 1 A&E department are generally pre-assessed by a nurse or doctor. If the nurse or doctor feels that the patient's situation is not a serious accident or emergency, the patient may be directed to a nearby urgent treatment centre or referred to a GP on site, which will reduce the waiting queue in A&E and at the same time allow the patient to be treated quickly as well.

5.6 Currently, there are about 227 A&E service providers, of which 59% have set up Type 1 A&E department, 14% have Type 2 department, and 86% have Type 3 department. Though the majority of attendances were in Type 1 A&E departments (about 65%), the usage of Type 3 departments/urgent treatment centres had steadily risen from 28% in 2008-2009 to 33% in 2017-2018.⁵² In 2017-2018, the costs of NHS in providing A&E services in England amounted to £3.2 billion (HK\$32.2 billion). This represented a cost of about **£134 (HK\$1,350) per A&E attendance**.⁵³ However, the cost breakdown by type of A&E department is not published by NHS.

5.7 There were about 4 900 doctors (i.e. 0.09 per 1 000 population) and 14 613 registered nurses (i.e. 0.26 per 1 000 population) working in the A&E departments in 2017.⁵⁴ Different from Hong Kong with a waiting time target

⁵¹ See NHS Improvement (2018).

⁵² See NHS England (2019a).

⁵³ See NHS Improvement (2018).

⁵⁴ See NHS Improvement (2017).

for treatment, NHS has set a **target to admit, transfer or discharge 95% of the patients within four hours of arrival in the A&E departments** ("four-hour service target").⁵⁵ Due to the increasing demand for services, the ability of A&E departments to meet the performance target has declined in recent years,⁵⁶ particularly among Type 1 A&E departments.⁵⁷ This has prompted NHS to introduce policy measures to ease the service pressure.

Measures adopted to cope with the high service demand

5.8 In light of the demand challenges, NHS has **reviewed the urgent and emergency care system and introduced reforms** to address the issues since the early 2010s. Subsequent to the review conducted in 2013, NHS has enhanced the integration of various services in the system to cope with the rising service demand. Apart from strengthening the role of the ambulance service in handling the less serious cases outside hospital by implementing the Ambulance Response Programme, NHS has strived to **manage the demand for A&E services** through measures such as:

- (a) enhancing the **services of NHS 111** by (i) increasing the number of patients offered with clinical assessment during the call so that only those who genuinely need to attend an A&E department or use the ambulance service are advised to do so; (ii) booking GP appointments for call-in patients where appropriate, and (iii) rolling out "online 111" to provide digital access to the service;
- (b) introducing comprehensive **front-door clinical streaming** to assign patients to the most appropriate clinical pathways upon their arrival at an A&E department, e.g. re-directing less serious patients to alternative care such as co-located primary care services or urgent treatment centres;

⁵⁵ The four-hour service standard was introduced to the NHS in 2004 as a measure to combat crowding and exit block in the A&E departments, and to improve clinical outcomes. Research studies have indicated that overcrowding in A&E departments was associated with increased mortality and long hospital stays. See The Royal College of Emergency Medicine (2018).

⁵⁶ The percentage of patients spending four hours or less in A&E departments overall had declined from about 98% in 2008-2009 to less than 95% since 2013-2014.

⁵⁷ See NHS England (2019a).

- (c) standardizing the services of the urgent treatment centres which are **open at least 12 hours a day and seven days a week** and offer medical treatment with access to diagnostic facilities;⁵⁸ and
- (d) expanding the coverage of **evening and weekend GP services** which are observed to be effective in reducing A&E attendances.⁵⁹

5.9 Measures that are similar to those adopted in Hong Kong include **improving patient flow** by, for example, promoting better and timely transfer of patients between A&E and other departments, and seven-day discharge capabilities. Facing healthcare manpower resources issue as in Hong Kong, NHS has developed strategies to **strengthen the workforce** in emergency medicine which has been under high pressure in view of the increase in number of attendances and the complexity of patients' needs. The measures include growing a multi-professional workforce by creating a resilient senior decision-maker layer of emergency medicine staff, and engaging and preparing medical staff from other specialties such as GPs to support the work of the A&E departments.

Observed outcomes

5.10 Probably due to the multi-pronged measures implemented by NHS in its whole urgent and emergency care system, its performance in meeting the four-hour service target has been stabilized in the past two years. Nonetheless, it is noted that the service performance of the A&E departments has not only been affected by the growth in number of attendances but also the rising emergency admission to hospital (from 16.7% in 2008-2009 to 18.7% in 2017-2018)⁶⁰ With a view to freeing up acute hospital beds, the government has been investing in developing community health and social care facilities and services to serve patients who are stuck in the hospitals due to shortage of such services.

⁵⁸ Urgent treatment centres replace other similar facilities such as walk-in centres, minor injury units and urgent care centres operated by NHS to improve consistency of services and avoid confusion to patients.

⁵⁹ See NHS (2016) and National Institute of Economic and Social Research (2017).

⁶⁰ See NHS England (2019a) and The King's Fund (2017).

6. Concluding remarks

6.1 Hong Kong, NSW and England have been facing the challenge of an increasing demand for emergency care services. In Hong Kong, FSD has committed additional resources to cope with the growth in service demand for EAS and has been able to meet the service standard over the past few years. Yet, there have been concerns about the deployment of resources as the same service standard applies to all calls which may have different degree of urgency. FSD has publicly consulted a proposed medical priority dispatch system about a decade ago but it has not indicated whether it will in the long run pursue it. In NSW and England, a similar priority arrangement has been implemented for improving operational efficiency and managing the demand for both EAS and A&E services.

6.2 The ambulance call prioritization system adopted in NSW and England has been accepted by the public as reflected by the positive customer satisfaction ratings on NSW Ambulance and the positive results of the evaluation study of the new ambulance service model in England. Recently, both NSW Health and NHS have strengthened the role of ambulance service in helping relieve the burden of the A&E departments by treating non-emergency patients at the scene to avoid unnecessary conveyance to the A&E departments.

6.3 The A&E departments of public hospitals in Hong Kong have been under intense pressure in light of the high service demand and the shortage of manpower. The higher growth in number of serious and complicated cases has further strained the over-stretched service system which is reflected in the decline in service performance level for urgent and semi-urgent cases in recent years. Despite the manpower measures taken by HA to cope with the heavy service demand, the long waiting time for A&E services among semi-urgent and non-urgent patients has been of concern.

6.4 In contrast to Hong Kong, NSW and England have adopted a more diverse approach for easing the demand pressure by diverting the demand to alternative service options and improving the pathways of care/patient flow. In England, apart from major A&E departments, it has also established urgent treatment centres, GP out-of-hours services and NHS 111 under its emergency care system. The continued strengthening of different service options in the

emergency care system has enabled patients to get the right care in the right place that helps achieve a more focused utilization of resources.

6.5 NSW has emphasized a whole-of-hospital, system-wide approach in formulating relevant measures to drive improvement in service performance. Probably with greater healthcare manpower resources, NSW Health has a higher flexibility in introducing different models of emergency care (e.g. senior medical assessment and streaming) for public hospitals. Apart from improving emergency care services in EDs, it has also sought to strengthen the patient care coordination with an emphasis on hospital capacity and discharge planning which is considered key to easing the access block in EDs. With the multi-pronged efforts undertaken, both places have managed to smoothen the A&E services with improvements seen in meeting their four-hour service target.

Table — Emergency care services in selected places

	Hong Kong	New South Wales	England
A. Background information			
Population	• 7.41 million as at end-2017.	• 7.96 million as at March 2018.	• 55.6 million as at mid-2017.
Life expectancy at birth	• 81.9 years for males and 87.6 years for females in 2017.	• 81.1 years for males and 85.2 years for females in 2016.	• 79.6 years for males and 83.2 years for females in 2017.
Number of registered/practising doctors per 1 000 population	• 1.9 as at end-2017.	• 4.3 as at end-2017.	• 2.6 in 2017.
Number of registered/practising nurses per 1 000 population	• 7.3 as at end-2017.	• 13.3 as at end-2017.	• 4.9 in 2018 (for nurses working in NHS).
Number of beds in public hospitals per 1 000 population	• 3.8 as at end-2017.	• 2.78 in 2015-2016.	• 2.53 as at mid-2018.

Table — Emergency care services in selected places (cont'd)

	Hong Kong	New South Wales	England
B. Provision and usage of emergency ambulance service			
Restrictions on usage	<ul style="list-style-type: none"> No specific restriction. 	<ul style="list-style-type: none"> No specific restriction. 	<ul style="list-style-type: none"> No specific restriction.
Prioritization of service calls	<ul style="list-style-type: none"> No. 	<ul style="list-style-type: none"> Yes. Calls are prioritized into: <ul style="list-style-type: none"> (a) emergency/life-threatening (P1); (b) urgent but not life-threatening (P2); (c) time-critical (P3); and (d) non-emergency (P4-P9) cases. 	<ul style="list-style-type: none"> Yes. Calls are prioritized into: <ul style="list-style-type: none"> (a) life-threatening (Category 1); (b) emergency (Category 2); (c) urgent (Category 3); and (d) less urgent (Category 4) cases.
Service charges	<ul style="list-style-type: none"> Free of charge for all users. 	<ul style="list-style-type: none"> Users are charged a call out fee and an additional fee based on the distance travelled. Residents are subsidized and charged at the rate of 51% of the cost of service provision. 	<ul style="list-style-type: none"> Free of charge for all users.
Funding/service costs	<ul style="list-style-type: none"> HK\$1,768 million in 2017-2018. 	<ul style="list-style-type: none"> A\$888.3 million (HK\$5,179 million) in 2015-2016. 	<ul style="list-style-type: none"> £1.9 billion (HK\$19.1 billion) in 2017-2018.
Number of emergency calls	<ul style="list-style-type: none"> 734 310 in 2017 (99 per 1 000 population). 	<ul style="list-style-type: none"> 1.16 million in 2017-2018 (147 per 1 000 population). 	<ul style="list-style-type: none"> 10.7 million in 2015-2016 (195 per 1 000 population).
Growth in number of emergency calls	<ul style="list-style-type: none"> 22% between 2008 and 2017 (2.5% per annum on average). 	<ul style="list-style-type: none"> 3% between 2008-2009 and 2017-2018 (0.3% per annum on average). 	<ul style="list-style-type: none"> 32% between 2010-2011 and 2015-2016 (5.2% per annum on average).

Table — Emergency care services in selected places (cont'd)

	Hong Kong	New South Wales	England
C. Provision and usage of accident and emergency services			
Number of premises	<ul style="list-style-type: none"> • 18. 	<ul style="list-style-type: none"> • 176. 	<ul style="list-style-type: none"> • About 227 NHS A&E service providers, of which 59% provide Type 1 major A&E department, 14% provide Type 2 single specialty A&E department and 86% provide Type 3 A&E department/urgent treatment centre.
Workforce in the public A&E departments	<ul style="list-style-type: none"> • 487 doctors as at end-2017 (or 0.07 per 1 000 population). • 1 134 nurses as at end-2017 (or 0.15 per 1 000 population). 	<ul style="list-style-type: none"> • 557 registered doctors specializing in emergency medicine as at end-2017 (including doctors working in the public and private sectors) (or 0.07 per 1 000 population). 	<ul style="list-style-type: none"> • 4 900 doctors in 2017 (or 0.09 per 1 000 population). • 14 613 registered nurses in 2017 (or 0.26 per 1 000 population).
Restrictions on usage	<ul style="list-style-type: none"> • No specific restriction. 	<ul style="list-style-type: none"> • No specific restriction. 	<ul style="list-style-type: none"> • No specific restriction.
Service charges	<ul style="list-style-type: none"> • HK\$180 per attendance for Hong Kong residents. • HK\$1,230 per attendance for non-Hong Kong residents. 	<ul style="list-style-type: none"> • NSW Health provides free services at public emergency departments to Australian citizens and permanent residents. 	<ul style="list-style-type: none"> • NHS provides free A&E services (excluding emergency treatment if admitted to hospital) to all users.
Service costs per attendance	<ul style="list-style-type: none"> • HK\$1,390 per attendance in 2017-2018. 	<ul style="list-style-type: none"> • A\$600 (HK\$3,500) per attendance in 2015-2016. 	<ul style="list-style-type: none"> • About £134 (HK\$1,350) per attendance in 2017-2018.

Table — Emergency care services in selected places (cont'd)

	Hong Kong	New South Wales	England
C. Provision and usage of accident and emergency services (cont'd)			
Number of attendances in 2017-2018	<ul style="list-style-type: none"> 2.19 million (296 per 1 000 population). 	<ul style="list-style-type: none"> 2.9 million (359 per 1 000 population). 	<ul style="list-style-type: none"> 23.8 million (428 per 1 000 population).
Growth rate of attendances between 2008-2009 and 2017-2018	<ul style="list-style-type: none"> 3% for all cases and 27% for Triage 1 to Triage 3 (i.e. critical, emergency and urgent) cases. 	<ul style="list-style-type: none"> 43% for all cases and 74% for Triage 1 to Triage 3 (i.e. immediate, emergency and urgent) cases. 	<ul style="list-style-type: none"> 22% for all cases and 13% for cases in major consultant led A&E (Type 1 and Type 2) departments.
Percentage of emergency attendances in 2017-2018	<ul style="list-style-type: none"> 39% of total first attendances were Triage 1 to Triage 3 (i.e. critical, emergency and urgent) cases. 	<ul style="list-style-type: none"> 47% were Triage 1 to Triage 3 (i.e. immediate, emergency and urgent) cases. 	<ul style="list-style-type: none"> 67% were attendances at major consultant led A&E (Type 1 and Type 2) departments.
Percentage of non-emergency attendances in 2017-2018	<ul style="list-style-type: none"> 61% of total first attendances were Triage 4 and Triage 5 (i.e. semi-urgent and non-urgent) cases. 	<ul style="list-style-type: none"> 53% were Triage 4 and Triage 5 (i.e. semi-urgent and non-urgent) cases. 	<ul style="list-style-type: none"> 33% were attendances at urgent treatment centres (Type 3 A&E departments).

Table — Emergency care services in selected places (cont'd)

	Hong Kong	New South Wales	England
D. Service performance of accident and emergency services			
Percentage of cases seen within target waiting time	<ul style="list-style-type: none"> Performance in 2017-2018: <ul style="list-style-type: none"> (a) Triage 1 (critical) cases – 100% with immediate treatment against a target of 100%; (b) Triage 2 (emergency) cases - 97% seen within 15 minutes against a target of 95%; (c) Triage 3 (urgent) cases – 76% seen within 30 minutes against a target of 90%; (d) Triage 4 (semi-urgent) cases – 66% seen within 120 minutes against a target of 75%; and (e) Triage 5 (non-urgent) cases – target waiting time not specified. 	<ul style="list-style-type: none"> Performance in the period between January and March 2018: <ul style="list-style-type: none"> (a) Triage 1 (immediate) cases – waiting time not recorded; (b) Triage 2 (emergency) cases – 69% seen within 10 minutes against a target of 80%; (c) Triage 3 (urgent) cases – 71% seen within 30 minutes against a target of 75%; (d) Triage 4 (semi-urgent) cases – 79% seen within 60 minutes against a target of 70%; and (e) Triage 5 (non-urgent) cases – 94% seen within 120 minutes against a target of 70%. 	<ul style="list-style-type: none"> Not relevant.
Meeting the service standard of admitting, transferring or discharging patients within four hours of arrival at the A&E departments	<ul style="list-style-type: none"> Not relevant. 	<ul style="list-style-type: none"> 74% in the first quarter of 2018 against a target of 81%. 	<ul style="list-style-type: none"> 88% in 2017-2018 against a target of 95%.

Table — Emergency care services in selected places (cont'd)

	Hong Kong	New South Wales	England
E. Measures to address high demand for emergency ambulance services			
Major measures	<ul style="list-style-type: none"> Educating the public on the proper use of EAS. 	<ul style="list-style-type: none"> Directing non-urgent calls to a 24-hour health service hotline for further assessment and provision of advice on service options; and avoiding unnecessary conveyance to the emergency departments by treating non-emergency cases at the scene. 	<ul style="list-style-type: none"> Allowing more time to assess the conditions of patients to determine an appropriate response for non-life-threatening cases; and treating non-emergency patients at the scene or directing them to other services for obtaining medical advice or treatment.
F. Measures to address high demand for accident and emergency services			
Major measures	<ul style="list-style-type: none"> Strengthening the workforce in A&E departments; enhancing outreach service support for the residential care homes for the elderly; reducing avoidable hospitalization by measures such as enhancing geriatrics support and virology services in A&E departments; and promoting timely transfer/discharge of patients to ease the access block. 	<ul style="list-style-type: none"> Implementing streaming of patients and nurse-initiated diagnostics; providing ambulatory care or community-based service alternatives (e.g. booking outpatient clinic for ED patients for follow-up care); strengthening the role of the ambulance service in handling less serious cases outside hospital; and enhancing patient care coordination and discharge planning to ease the access. 	<ul style="list-style-type: none"> Providing alternative emergency care options such as GP out-of-hours services and urgent treatment centres; enhancing the services of NHS 111 for assessing and diverting patients to alternative care options; strengthening the role of the ambulance service in handling less serious cases outside hospital; and promoting timely transfer/discharge of patients to ease the access block.

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