مركز البيان للدراسات والتخطيط
Al-Bayan Center for Planning and Studies

Restoring the Iraqi Healthcare Sector: The British National Health Service as a Model

Al-Bayan Center Studies Series

مركز البيان للدراسات والتخطيط
Al-Bayan Center for Planning and Studies

Restoring the Iraqi Healthcare Sector: The British National Health Service as a Model

Al-Bayan Center Studies Series

About Al-Bayan Center for Planning and Studies

Al-Bayan Center for Planning and Studies is an independent, non-profit think tank based in Baghdad. Its primary mission is to offer an authentic perspective on public and foreign policy issues related to Iraq and the Middle East region.

Al-Bayan Center pursues its vision by conducting independent analysis, as well as proposing workable solutions for complex issues that concern policymakers and academics.

This study was written by Integrity exclusively for Al-Bayan Center for Planning and Studies, and this study represents the opinions of Integrity

www.bayancenter.org

info@bayancenter.org

Restoring the Iraqi Healthcare Sector: The British National Health Service as a Model

Introduction

Once viewed as having one of the most robust healthcare systems across the Middle East, the Iraqi healthcare system has experienced a steady decline since the late-1980s as a result of conflicts and the resultant economic troubles that have gripped the country. The biggest blows to the system came during the civil conflicts across the country after 2003 and, more recently, as a result of the rise of the Islamic State (IS) in 2014. The rise of the IS and the subsequent battles to liberate Iraqi territory from the militant group have severely damaged and outright destroyed many healthcare facilities that were already struggling to survive in the aftermath of the war in 2003. Similarly, the centralised system that was founded in the 1970s, which has since remained relatively unchanged, is barely able to meet the demands and needs of the Iraqi population. It is evident that a change to this beleaguered system is required.

With the military defeat of the IS over the course of 2017, the agenda for 2018 and beyond appears to be reconstruction. The needs and challenges of rebuilding Iraqi cities and infrastructure bring with it an opportunity to restructure the system to better serve the needs of the Iraqi people as well as address the new challenges that resulted from the country's turbulent history. Many of the challenges, such as the existence of a large, war-scarred populace, environmental degradation, shortages, corruption and growing drug abuse rates were not prevalent in Iraq when the system was built.

Established as a way of coping with Britain's health crisis in the aftermath of World War II, the British National Health Service (NHS)

may offer lessons for Iraq in rebuilding its healthcare sector and looking after its populace. Like the Iraqi healthcare system, the NHS had a highly centralised structure but has changed and evolved over the years amidst the rise of new problems, new outlooks and new technologies. While it continues to suffer from problems today, it remains one of the most highly-regarded healthcare services around the globe.

This paper aims to provide a historical context for the Iraqi healthcare system and the British NHS, showcasing how these different systems evolved and were challenged before providing suggestions on whether the Government of Iraq can build its post-War healthcare system within an NHS-like framework. This paper concludes that the NHS provides an excellent model towards addressing the demands and needs of its patients. The NHS also offers lessons towards employing a hybrid model of centralised and decentralised models that make response times more efficient. This paper concludes that the locally-funded healthcare sector from Norway can also provide lessons towards fostering local legitimacy while alleviating the impacts of corruption and bloated bureaucracy in the process. The fact that Norway itself is an oil economy should make application in an Iraqi context more relevant.

This paper also concludes that a number of measures surrounding privatisation are not yet suitable for Iraq due to the aforementioned corruption. The authors believe that the health system itself as well as anti-corruption measures are not yet sufficiently entrenched to allow privatisation to take place without significant detriments to the poorer Iraqi populace.

On the whole, however, this paper's findings are that the NHS offers significant lessons towards providing robust and holistic healthcare to Iraq and its people, allowing the country to move beyond decades of steady systemic stagnation.

General Features of the Iraqi Healthcare System

The organisational structure of the Iraqi healthcare system has not changed significantly since the 1970s. It consists of two main levels: The Ministry of Health as the central planning level; and the Directorates of Health which administer the governorates locally. After 1991, a Kurdish Ministry of Health was established in the governorates of Erbil, Dohuk and Suleymaniyah under the authority of the Kurdistan Regional Government (KRG)[1]. In both instances, the ministries followed a centralised model, with most of the resources and capacity concentrated in Baghdad. This model also put the focus on hospitals and curative care. This remained the case even after the government implemented primary healthcare centres into its system in 1983[2].

In the public sector, health services are provided through a network of primary healthcare centres and hospitals. The primary healthcare centres provide preventive and basic services. In urban areas, they may be served by doctors but in most rural areas, they are served by medical auxiliaries. In conjunction with the low delivery of supplies, rural centres tend to suffer from reduced quality[3]. Patients can be referred to hospitals by the primary healthcare centres. However, many Iraqis do not have easy access to hospitals due to uneven distribution. The centralised approach that has remained broadly unchanged has left the system barely able to cope with the challenges past its initial creation.

1. Cetorelli, Valeria; Shabila, Nazar P. «Expansion of health facilities in Iraq a decade after the US-led invasion, 2003–2012», *Conflict and Health*, vol. 8, No. 16, (2014), p.2
2. Al-Halfi, Thamer Kadum; Lafta, Riyadh; Burnham, Gilbert. «Health Services in Iraq», Lancet, vol. 381, (2013), p. 942
Ibid, p. 940
3. Cetorelli, Valeria; Shabila, Nazar P. «Expansion of health facilities in Iraq a decade after the US-led invasion, 2003–2012», Conflict and Health, vol. 8, No. 16, (2014), p.2

Four Decades of Changes: A Background to the Iraqi Healthcare Sector

The Iraqi Healthcare Sector Between the 1950s and 2003

The modern Iraqi healthcare sector has its origins in the 1950s, when the Iraqi Ministry of Health was founded. At the time, the country was experiencing a period of rapid modernisation, fuelled by rising oil production and prices. After numerous configurations and models, the sector assumed its centralised configuration in the 1970s. Although some amendments were made to this system in 1981, 1983 and 2003, much of the 1970s configuration remains at the core of the Iraqi healthcare sector[4]. The centralised model of the Iraqi healthcare sector is primarily focused on hospitals and curative care, providing free universal coverage but with the purse strings and resources held by (and often concentrated in) Baghdad[5]. According to the World Health Organisation, the Iraqi primary healthcare sector is based on:

"...practical, scientifically sound and socially acceptable methods and technologies made universally accessible to individuals and families in the community through their full participation in the spirit of self-reliance and self-determination."[6]

During the 1970s and early-1980s, the Iraqi healthcare sector was considered the best in the Middle East. The country offered free healthcare in 172 hospitals and 1200 primary health care clinics. Iraqi medical graduates often received specialised training in Germany and the United Kingdom, further bolstering their skills. Furthermore, most medical graduates were barred from leaving Iraq between the late 1980s

4. Al-Halfi, Thamer Kadum; Lafta, Riyadh; Burnham, Gilbert. «Health Services in Iraq», Lancet, vol. 381, (2013), p. 942
5. Ibid, p. 942
6. "Iraq: Primary Health Care", World Health Organisation, <www.emro.who.int/irq/programmes/primary-health-care.html>, [Accessed 19-March-2018]

and 2004 in a bid to prevent brain drain.

The reach and quality provided by the sector began to falter in the 1980s after Saddam Hussein came to power and diverted funding away from the health sector. However, much of the decline was due to the Iran–Iraq War that lasted between 1980 and 1988. The conflict left some 500,000 people from both sides dead and many more injured, putting immense pressure on healthcare facilities[7]. This was particularly prevalent near the borders of Iran which were subject to shelling and Iranian incursions. Furthermore, as the war dragged on, doctors and medical professionals were assigned from the civilian to the military sector. By the end of the war, the Iraqi Government was struggling with debts that left the country unable to deal with the aftermath in a sufficient manner.

The Gulf War in 1991 and its aftermath would lead to the near-collapse of the sector. In addition to the direct impact of the military conflict - which still caused damage in southern Iraq, although its focus remained Kuwait - the subsequent embargo that lasted until 2003 led to a slow and gradual deterioration of living standards and healthcare. Deprived of most of its funds due to the destruction of the southern oil wells and restrictions to exports, the Iraqi Government was unable to fund the healthcare sector. It is estimated that as much as 90% of the healthcare funding was slashed between 1993 and 2003[8]. Many of the facilities built in the 1970s and 1980s, already showing signs of age, deteriorated further. Those still in service could offer a fraction of their services due to lack of supplies, equipment and staff[9]. In addition to the direct impacts of the lack of funding, supplies and equipment,

7. Al-Halfi, Thamer Kadum; Lafta, Riyadh; Burnham, Gilbert. «Health Services in Iraq», Lancet, vol. 381, (2013), p. 939
8. "Healthcare in Iraq", IRFAD, 2014, <www.irfad.org/healthcare-in-iraq/>, [Accessed 07-March-2018]
9. Al-Halfi, Thamer Kadum; Lafta, Riyadh; Burnham, Gilbert. «Health Services in Iraq», Lancet, vol. 381, (2013), p. 939

ancillary impacts of the conflicts also began to impact the sector. Prime among them was the loss, deterioration and destruction of utilities and sanitation that resulted in outbreaks of cholera and dysentery[10]. The faltering quality of education also had an adverse impact on the availability of professionals. The oil-for-food programme could alleviate some of these issues but the overall situation continued its downward trajectory.

The Iraqi Healthcare Sector Between 2003 and 2013

The Iraqi healthcare sector suffered another shock in the war of 2003. During the initial invasion of the United States, it is estimated that around 12% of Iraqi hospitals were destroyed, as well as two public health laboratories[11]. However, by far the greatest damage done to the sector occurred during the period of lawlessness and rioting that occurred after the fall of Saddam Hussein in 2003. The lack of protection of medical facilities, coupled with a growing insurgency, led to the targeting of medical facilities for their stocks of medical supplies and pharmaceuticals, resulting in many ordinary Iraqis unable to access vital medical goods even after the end of the embargo.

The subsequent and prolonged civil disorder in the country also had major impacts on the retention of health professionals. The lifting of restrictions that barred medical professionals from the country, in conjunction with prolonged civil disorder and lawlessness, has resulted in many Iraqi doctors and professionals – as many as 50% of the available workforce – seeking employment elsewhere. Efforts by the Iraqi Government to curtail the outflow, such as a freeze on medical diplomas in 2007, only stoked more anger and frustration[12]. By 2012,

10. Ibid, p. 940
11. "Healthcare in Iraq", IRFAD, 2014, <www.irfad.org/healthcare-in-iraq/>, [Accessed 07-March-2018]
12. Brulliard, Karen, Iraq Reimposes Freeze on Medical Diplomas In Bid to Keep Doctors From Fleeing Abroad, Washington Post, <www.washingtonpost.com/wp-dyn/content/article/2007/05/04/AR2007050402359.html>, 05-May-2007, [Accessed 19-March-1018]

the numbers had gone down somewhat. Out of the 1500–1800 medical graduates each year, about a quarter left to work in the United States, United Kingdom, Australia or the Kurdistan Region of Iraq (KRI). Return programmes to encourage Iraqi migrant doctors have proven ineffective[13].

That is not to say there were not attempts to rebuild the healthcare system and improve conditions for the Iraqi people. It is estimated that between 2003 and 2011, some $53 billion in assistance schemes and aid packages were implemented in Iraq[14]. These schemes, often implemented by the WHO or the United Nations, made some progress towards alleviating the difficulties faced by the health sector in Iraq. However, their impacts were uneven and the improvements they offered usually cancelled out by other developments. To contextualise, in January 2003, the country had 251 hospitals (30 of which were destroyed or rendered inoperable during the Coalition invasion in 2003) and 1918 primary healthcare centres, 361 of which were public clinics[15]. By 2013, the country had 229 hospitals including 61 teaching hospitals and 2504 primary healthcare centres[16]. Thus, although the number of hospitals remained stagnant, the number of primary healthcare centres showed improvements.

However, when these numbers are assessed within the context of their geography and demographics, it is evident that very few regions saw net improvements. For instance, comparing the number of hospitals per 100,000 people shows improvements only in the KRI, and only by a margin of 0.4 between 2003 and 2012. Central and southern Iraq

13. Al-Halfi, Thamer Kadum; Lafta, Riyadh; Burnham, Gilbert. «Health Services in Iraq», Lancet, vol. 381, (2013), p. 944
14. Ibid, p. 939
15. «Services Provided by Public Health Facilities in Iraq: 2003», World Health Organisation, January 2003
16. Al-Halfi, Thamer Kadum; Lafta, Riyadh; Burnham, Gilbert. «Health Services in Iraq», Lancet, vol. 381, (2013), p. 942

saw no improvements on the whole and in the governorates of Wasit, Kirkuk, Maysan, Nineveh and Baghdad, the improvements were offset by the rise in population[17]. The numbers of primary healthcare centres per 100,000 Iraqis showed better numbers, rising by 1.9 between 2.3 and 2012. However, even there, the disparity between the KRI and the rest of Iraq is apparent, with the former showing a rise of 4.3 and the latter showing a rise of only 1.4[18]. This is likely as a result of the relative and prolonged stability of the KRI during this period, as well as the economic boom, and brain drain from other parts of the country[19]. Indeed, the fact that many medical professionals fled Iraq as well as the fact that many medical facilities in central and southern Iraq required constant rebuilding and resupplying that ended up wasting resources that could have done to improving the foundation of the Iraqi healthcare sector. This was exacerbated by the endemic levels of corruption and mismanagement which hampered development and wasted resources. Analysts note that this was a common issue in both the KRI and the rest of Iraq[20]

Furthermore, unequal distribution has been a problem even when the KRI is not factored in. The majority of the improvements to the Iraqi healthcare sector between 2003 and 2013 took place in major cities such as Baghdad and Mosul. In particular, Baghdad is home a majority of Iraq's doctors and healthcare specialists even though it was home to some 20% of the population[21]. Meanwhile, nearly half of all primary healthcare centres did not have a medical doctor and were served by nurses, medics and other auxiliaries[22]. The inconsistent quality

17. Cetorelli, Valeria; Shabila, Nazar P. «Expansion of health facilities in Iraq a decade after the US-led invasion, 2003–2012», Conflict and Health, vol. 8, No. 16, (2014), p.4
18. Ibid, p. 3
19. Ibid, pp. 3-4
20. Ibid, p. 5-6
21. Al-Halfi, Thamer Kadum; Lafta, Riyadh; Burnham, Gilbert. «Health Services in Iraq», Lancet, vol. 381, (2013), p. 944
22. Ibid, p. 942

has left many Iraqis, particularly richer ones, to seek private healthcare. However, even these clinics, often staffed by off-duty doctors, were found to provide sub-optimal quality service[23]

Thus, by the time the conflict against the IS erupted in 2014, the country's healthcare system was already suffering from inefficiency, limited coverage, unequal quality borne out of a steady decline since the late 1980s and periodic conflicts. Indeed, the UN estimated that as late as 2012, there were still 1.4 million displaced people in Iraq and, on the whole, 3.1 million people in need of assistance, including medical assistance that was generally insufficient, highlighting the slow and uneven pace of reconstruction and stabilisation across the country on the whole. The events of 2014 and onwards would go on to put further pressure on the healthcare sector, causing widespread destruction wherever the IS militants were present.

The Iraqi Healthcare Sector Between 2014 and 2018

After growing increasingly unstable and violent, the civil war in Syria spread to Iraq in 2014. In early 2014, IS militants took over the city of Fallujah. By the summer of 2014, the militants were in control of much of the Anbar and Nineveh Governorates, as well as parts of Kirkuk, Diyala and Salahuddin, resulting in widespread displacement from much of northern and western Iraq to the KRI, central Iraq and southern Iraq. These numbers grew as the Iraqi Security Forces (ISF) launched operations against the militants, resulting in heavy fighting in many cities. Worsening conditions in IS-held cities also resulted in continuous and growing displacement. The UN's Office for the Coordination of Humanitarian Affairs (OCHA) estimated that 3.1 million Iraqis had been displaced from their homes and communities between 2014 and the end of 2016[24]. It is estimated that another 500,000 Iraqis were displaced as operations in West Mosul and, subsequently,

23. Ibid, p. 942
24. "Iraq Humanitarian Response Plan", OCHA, February 2017, p. 5

Tal Afar and Hawija commenced. In conjunction with pressure placed on existing cities and infrastructure, OCHA estimated that the total number of needful population was at 11 million, about a third of Iraq's population[25].

Many of those displaced suffered from serious health conditions such as malnutrition. Injuries caused by IS militants and improvised explosive devices (IED) during their trek was also a common concern[26]. Many of these displaced Iraqis also ended up in camps where sanitation, protection from elements and medical support was lacking. This resulted with not only many illnesses going untreated, but infectious diseases finding fertile ground to spread among the populace. Things were not better for those who found protection in cities, as many hospitals in Baghdad and Erbil struggled to cope with the influx of Iraqis[27].

The situation was worse in the areas under the control of the IS. Although the militant group often justified its rule in terms of providing services to the local population, in reality the group often denied medical assistance to those who were not affiliated with the group in some manner. Specialist treatment and medication, in particular, was frequently reserved only for militants and their families, leaving many to fend for themselves[28]. Siege conditions in IS-held cities and shortages of basic food, water and medical supplies also led to worsened health among Iraqis, particularly in Mosul[29].

25. Ibid, p. 5
26. «Civilians account for the majority of victims of ISIS IEDs», Al-Shahid News, 23-December-2016, <https://alshahidwitness.com/civilians-majority-victims-isis-ieds/>, [Accessed 07-March-2018]
27. Boskovitch, Angela. «A Struggle to Care for Iraq's Disabled», Carnegie Endowment for International Peace, 20-December-2017, <http://carnegieendowment.org/sada/75078>, [Accessed 10-March-2018]
28. «Mosul civilian: ISIS would deny medicine for non-members», Al-Shahid News, 09-March-2017, <https://alshahidwitness.com/civilian-isis-deny-medicine/>, [Accessed 10-March-2018]
29. «ISIS cuts water supply for Iraqi civilians in east Mosul as crisis worsens», Al-Shahid News, 11-April-2017, <https://alshahidwitness.com/isis-water-civilians-mosul-crisis/>, [Accessed 10-March-2018]

Unfortunately, the defeat of the militants across Iraq and the return of over 3.7 million Iraqis to their homes have not alleviated the adverse medical conditions across the country due to the destruction of nearly every medical facility in areas formerly held by the IS. Quite often, the destruction was borne out as a result of the militants using medical facilities as bases, resulting in military strikes that end up destroying the installation[30]. In other instances, however, the militants pursued scorched earth tactics to destroy whatever resources they could not plunder[31]. While some of these facilities have since returned to service, many others remain completely destroyed. Furthermore, even those that now function are beset with many shortages and challenges[32]. Thus, many areas liberated from the IS will continue to suffer from lack of medical infrastructure.

The governmental vacuum caused by the militant presence in northern Iraq, in conjunction with inconsistent bureaucratic bookkeeping, makes it difficult to identify how many hospitals and primary healthcare centres remain active in Iraq. A 2015 document by the Iraqi Ministry of Health indicates that there are 212 public and 95 private hospitals across the whole of Iraq, 207 and 93 of which respectively are fully or partially functioning[33]. The same document lists the number of primary healthcare centres as only 990[34], thus highlighting a significant increase of hospitals since 2013 (despite the on–going war and Iraq's budgetary constraints) and a significant decrease of primary healthcare

30. «Reopening of hospital in Jalawla after suffering damage during ISIS rule», Al-Shahid News, 12-January-2018, <https://alshahidwitness.com/reopening-hospital-jalawla-isis/>, [Accessed 10-March-2018]
31. «ISIS torches Ibn al-Athir Hospital in Mosul», Al-Shahid News, 1-February-2017, <https://alshahidwitness.com/isis-torches-hospital-mosul/>, [Accessed 10-March-2018]
32. «General Hospital of Tal Afar opens as life returns to the town», Al-Shahid News, 09-January-2018, <https://alshahidwitness.com/general-hospital-tal-afar/>, [Accessed 10-March-2018]
33. «Iraqi Healthcare Statistics 2015», Iraq Ministry of Health, 2015, p. 7
34. Ibid, p. 7

facilities. Ministry of Health documents from 2016 do not make the situation any clearer, as they point out that there are 260 public and 121 private hospitals[35] and 2669 primary healthcare facilities[36]. Such change within the space of a single year is unrealistic. Furthermore, the fact that the document lists the numbers of hospitals in Anbar and Nineveh even though large swathes of these governorates were still under militant control in 2016 leaves it unclear whether accurate and-to-date information was used. This is supported by the fact that figures of current usage (such as number of available beds and inpatients) are listed as "not available" for Anbar and Nineveh, suggesting that some of the information was gathered from outdated sources. It is also possible that different branches and personnel within the Ministry of Health employ different metrics to determine what constitutes an active hospital or primary healthcare centre.

To be sure, a number of hospitals and primary healthcare centres across formerly IS-ruled areas have reopened since the ISF liberated these areas[37]. However, such achievements only took place after extensive reconstruction efforts and funding and is unlikely to be a common occurrence across Iraq. Given the impacts and tactics of the IS, it is likelier that the majority of the hospitals and healthcare centres in Anbar and Nineveh remain out of service.

What is certain, however, is that the Iraqi healthcare sector, already suffering from extensive neglect and damage, has suffered another blow following the rise of the IS. With the conflict virtually at an end in 2018 (although the group does continue to pose a risk in the form of an insurgency), it needs extensive reconstruction. The document

35. "Iraq Annual Statistical Report 2016", Iraq Ministry of Health, 2017, p. 154
36. Ibid, p. 97
37. «International organisations establish two hospitals in west Mosul», Al-Shahid News, 21-February-2018, <https://alshahidwitness.com/international-establish-hospitals-mosul/>, [Accessed 10-March-2018]

assessing the damage needs of various sectors in the country, the Iraqi Government determined that there the Iraqi healthcare sector will require $4,365 million (IQD5,159 billion), amounting to about 4.9% of the total reconstruction needs[38]. This amount stands in stark contrast to the IQD5,044 billion that was allocated to the Ministry of Health in 2016[39]. With an over 100% deficit, restoring the healthcare sector to its pre-War shape will represent a significant challenge.

Thus, it is expected that ensuring equitable reconstruction and returning existing healthcare facilities to working order while rebuilding those that have been destroyed will be a vital priority over the course of 2018 and onwards.

Primary Areas of Concern for the Iraqi Healthcare Sector 2018 Onwards

Although reconstruction is the primary concern (and goal) of the Iraqi healthcare sector from 2018, the question of how that reconstruction should look like remains unanswered. The fact is that the previous, over-centralised healthcare system that was established in the 1970s and changed little since is no longer capable of addressing the demands and needs of the Iraqi population.

Furthermore, the Iraqi healthcare sector today faces a number of challenges from a variety of areas. Some issues, such as rising cases of cardiovascular diseases and cancer rates, are direct public health concerns. Others, such as lack of sanitation may appear like they are the purview of other sectors but the resultant diseases end up putting additional pressure on the healthcare sector that could be avoided. Building the post-IS healthcare system with these challenges in mind will not only help alleviate the living conditions of many Iraqis, but it

38. "Damage Needs Assessment for Iraq", Government of Iraq, 2017
39. "Iraq Annual Statistical Report 2016", Iraq Ministry of Health, 2017, p. 271

will ensure that the result system can be flexible enough to deal with these issues if and when the need arises.

These issues consist of:

- Chronic and Acute Health Conditions and Disabilities
- The "Fallujah Syndrome"
- Mental Health Ailments
- Drug Addiction
- Environmental Degradation and Pollution
- Corruption, Bureaucracy and Waste
- Brain Drain and Lack of Doctor Safety

Chronic and Acute Health Conditions and Disabilities

The three-year IS rule across much of northern and western Iraq and the battles to liberate these areas have left many victims of conflict behind. The Iraqi Ministry of Health notes that over the course of 2016, 27,331 Iraqis were injured as a result of "terrorist operations"[40]. Given the low numbers for Nineveh and Anbar (763 and 0 respectively) in the report, the actual number is likely a lot higher. Bombings, mines and IED attacks make for the majority of the victims, many of whom go on to suffer from life changing injuries and lifelong disabilities[41]. Furthermore, the existence of countless members of the ISF and

40. "Iraq Annual Statistical Report 2016", Iraq Ministry of Health, 2017, p. 296
41. «Civilians account for the majority of victims of ISIS IEDs», Al-Shahid News, 23-December-2016, <https://alshahidwitness.com/civilians-majority-victims-isis-ieds/>, [Accessed 10-March-2018]

Popular Mobilisation Units (PMU) have also suffered permanent, life–changing injuries in the line of duty. Caring for these individuals will require not only require a comprehensive healthcare and aftercare system that can provide them with prosthetics and mobility devices (such as wheelchairs) but it will also require a shift to how society views and perceives people with disabilities. Many people who have suffered disabilities, particularly amputations, lament that they have not received sufficient care, forcing them to stay in their homes months at a time[42]. Programmes and initiatives to help such people exist but they are often privately funded and offer only limited coverage. Addressing the demands and needs of people with disabilities and ensuring that their lives after the IS are not beset with suffering will be imperative.

Beyond deaths and injuries linked to war (which only form some 4% of Iraqi fatalities), the majority of Iraqi deaths are caused by cerebrovascular diseases, ischemic heart diseases, heart failures, hypertensive diseases, cardiovascular diseases and malignant neoplasms (cancer)[43]. Although genetics can be a factor for every one of these conditions, all of them except malignant neoplasms are also linked to lifestyle–related factors such as obesity and smoking, both of which have been prevalent in Iraq over the years[44]. Indeed, with an obesity rate hovering around 67% for adults, it is apparent that the many deaths could be avoided with a change to dietary outlook and preferences, thus taking unnecessary pressure off the healthcare system[45].

The high prevalence of cancer is also a concern, given that the numbers have risen in recent years, particularly childhood cancers.

42. «Kuwaiti Medical Campaign Helps Disabled People Of Mosul», Al-Shahid News, 19-January-2018 <https://alshahidwitness.com/medical-campaign-help-disabled-mosul/>, [Accessed 10-March-2018]
43. "Iraq Annual Statistical Report 2016", Iraq Ministry of Health, 2017, p. 79
44. Al-Halfi, Thamer Kadum; Lafta, Riyadh; Burnham, Gilbert. «Health Services in Iraq», Lancet, vol. 381, (2013), p. 940
45. Ibid, p. 940

With a high population of smokers, the likelihood of cancer rates rising in the coming years is very high[46].

The "Fallujah Syndrome"

Since 2005, doctors in the city of Fallujah have noticed an increase in birth defects, childhood cancers on higher-than-average rates, congenital heart defects, spina bifida and other health hazards. Research as to the source of these defects has remained inconclusive. One research found that congenital factors (such as intra-family marriages and parents with similar health issues) were a factor but noted that many other parents of such children did not fall under these categories[47]. Other researchers found that parents of those children were found to have high levels of lead, mercury and uranium in their hair, teeth and nails[48]. In both instances, the conclusion of the research was that radioactive weapons (such as depleted uranium shells) and other munitions with harmful substances used in Fallujah during the Second Battle of Fallujah in 2004 contributed to the subsequent spate of birth defects sometimes referred to as the "Fallujah Syndrome".

This is highly significant due to the US-led International Coalition was found to have employed similar weapons against the IS in Syria[49]. Given the sheer intensity of the airstrikes and shelling against the IS militants in West Mosul (and likely elsewhere) during the ISF operations, there is a very high chance that Mosul too is peppered with hazardous radioactive and chemical substances. Without adequate clean-up and

46. Ibid, pp. 940-941
47. Alaani, Samira; al-Fallouji, A.R.; Busby, Christopher. "Pilot Study of Congenital Anomaly Rates at Birth in Fallujah", JIMA, vol. 44, (2012), pp. 3-5
48. Lupkin, Sydney, «Birth Defects Plague Iraq, But Cause Unknown», ABC News, 25-March-2013,<abcnews.go.com/Health/birth-defects-plague-iraq-10-years-us-invasion/story?id=18793428>, [Accessed 10-March-2018]
49. Oakford, Samuel, The United States Used Depleted Uranium in Syria, Foreign Policy Magazine, 14-February-2017, <foreignpolicy.com/2017/02/14/the-united-states-used-depleted-uranium-in-syria/>, [Accessed 12-March-2018]

preventative pre-natal measures, displaced Iraqis returning to Mosul may find themselves and their children suffering for years to come.

Mental Health Ailments

Years of conflict had highly adverse impacts on the mental health and well-being of many ordinary Iraqis. However, while the physical impacts of the numerous conflicts in Iraq have been well-documented, the exact impacts are a lot less understood. Furthermore, although the Ministry of Health has declared mental health to be part of the basic health package, it remains unclear if the programmes had far-reaching impacts[50].

The brutal tactics employed by the IS, including exposing children to violent acts in a bid to desensitise them and the weaponised use of sexual assault and rape has almost certainly increased the number of Iraqis suffering from post-traumatic stress disorder[51]. Some estimates suggest that 70% of the Yazidi community, in particular, may be suffering from PTSD, with as many as 20% grappling from suicidal thoughts as a result of the trauma experienced at the hands of the militants[52]. Iraq has a deficit of experts in treating PTSD and other conditions resulting from trauma or conflict. The training and allocating of trained staff that can help heal these communities and individuals will therefore depending on providing enough funding and a coordinated response to the crisis.

50. Al-Halfi, Thamer Kadum; Lafta, Riyadh; Burnham, Gilbert. «Health Services in Iraq», Lancet, vol. 381, (2013), p. 941
51. «Mosul children 'have seen things no one should see'», Al-Shahid, 22-December-2016, <https://alshahidwitness.com/mosul-children-seen-things-no-one-see/>, [Accessed 12-March-2018]
52. «Traumatised by ISIL, Yazidis seek help», Al-Jazeera, 28-October-2014, <https://www.aljazeera.com/news/middleeast/2014/10/traumatised-isil-yazidis-seek-help-201410269541068030 0.html>, [Accessed 12-March-2018]

Drug Addiction

Drug abuse rates in Iraq have been creeping up steadily since the removal of Saddam Hussein in 2003. However, 2014 saw a spike in drug abuse owing to the reduced security presence in Iraq's southern borders, allowing traffickers to bring in drugs from both Kuwait and Iran. The majority of illegal drugs used in Iraq consist of narcotics such as marijuana, hashish, Parkizol, Valium, Somadril, Tramadol and morphine derivatives such as Codeine[53]. However, stimulants such as Captagon, an amphetamine particularly popular among IS militants[54], has also spread among the wider Iraqi population. The city of Basra appears to be the entry point and epicentre for many of these drugs, followed by Baghdad and Maysan. So far, there are no reports of widespread use from western or northern Mosul. However, the popularity of Captagon, the prevalence of trauma and mental illness in former IS territories and the environment of relative lawlessness could all cause the drug crisis to spread to these regions.

A vital part of alleviating the crisis and preventing it from turning into a wider public health crisis will be for the healthcare sector to provide rehabilitative treatments for those caught in addiction, offering them physical and psychological support to help addicts free themselves from their condition.

Environmental Degradation and Pollution

Another impact of the conflict across Iraq over the course of the years has been environmental degradation and pollution. As mentioned above, part of the problem stems from the destruction of water and

53. «Basra: The epicentre of Iraq›s drug problem», The New Arab, 02-January-2018, <https://www.alaraby.co.uk/english/society/2018/1/2/basra-the-epicentre-of-iraqs-drug-problem>, [Accessed 12-March-2018]
54. Kan, Paul. «This is Your Jihad On Drugs», The War on the Rocks, 07-March-2016, <https://warontherocks.com/2016/03/this-is-your-jihad-on-drugs/>, [Accessed 13-March-2018]

sanitation infrastructure, leading to a rise in cholera and dysentery cases. Cities such as Mosul and Ramadi, which have suffered some of the heaviest destruction, will likely see an increase of cases relating to contaminated water and low sanitation. The Iraqi Ministry of Health should therefore take preventative measures to ensure any outbreak can be contained before it can take any lives.

Beyond the matter of contaminated water causing disease, lack of water on the whole represents a possible health concern for the future. Iraq has been going through a period of drought over the course of the past five years that has left water levels dangerously low across many rivers and reservoirs. The low water levels have decreased the availability of clean water, leading to an increased risk of the aforementioned conditions associated with contaminated water. Furthermore, the droughts have resulted in an increased frequency of sand storms, exacerbating the conditions of those suffering from skin and lung conditions[55]. Although heavy rains in early 2018 have provided some relief, the problem is likely to occur again, putting added strain on the Iraqi healthcare system.

The final environmental impact comes as a direct result of IS itself. During its retreat across northern Iraq in 2016, the militants set fire to the Qayyarah oil wells, just as Saddam Hussein had set fire to the Basra oil wells two decades ago. Unlike Basra, however, fires in Qayyarah caused a reaction with local sulphur deposits, creating a toxic smog that blanketed much of the region, causing many respiratory issues among the locals[56]. The fires have since been put out, but they have left many locals suffering from chronic conditions but treatment options are

55. «Dust storms sweep across Iraq as government solutions falter», Al-Shahid News, 03-November-2017, <https://alshahidwitness.com/dust-storms-iraq-government-solutions/>, [Accessed 12-March-2018]
56. «IS set fire to sulphur fields, creating toxic gas clouds that injure 1,000», Al-Shahid News, 23-October-2016, <https://alshahidwitness.com/sulphur-fields-toxic-gas-injure-1000/>, [Accessed 12-March-2018]

inadequate[57]. Furthermore, the long-term impacts of the toxic smog remain unknown. Just as the potential impacts of the "Fallujah effect", the aftereffects of the toxic smog here could end up causing a localised health crisis that will need to be dealt with sooner or later.

Corruption, Bureaucracy and Waste

While not a public health concern, the issue of corruption, excessive bureaucracy and waste are all issues that have proven detrimental to the reconstruction and improvement of the Iraqi healthcare system. A particularly stark display of the financial impacts of corruption is the phenomenon of "ghost employees" where an employee exists only on paper and their salaries are claimed by another individual. The World Bank estimates that the phenomenon of ghost employees can cost as much as $260 million a year[58]. The World Bank also identifies that a significant percentage of the health sector budget and subsidies go towards bureaucrats who are not strictly necessary or qualified but have simply been given a position due to familial, political and tribal connections[59]. The Bank also noted that the situation is worse in the KRG which experiences a similar bloat despite its smaller size[60]. On the whole, the sheer bloat of the bureaucratic sector means that actual doctors and hospitals get less money to treat patients.

In addition to preventing patients from receiving adequate care, corruption can cost lives if officials fail to hold institutions accountable for their failings as a result of graft and bribery. A 2016 fire in Baghdad's Yarmouk Maternity Hospital, which left at least 12 babies dead, was linked to an electrical fault that appears to have gone overlooked due

57. Westcott, Tom. «Photo Essay: The Black Smog of ISIS», Carnegie Endowment for International Peace, 20-December-2016, <http://carnegieendowment.org/sada/66515>, [Accessed 12-March-2018]
58. «Republic of Iraq Public Expenditure Review», World Bank Group, 2014, pp. 25-26
59. Ibid, p. 14
60. Ibid, p. 14

to a mixture of mismanagement and corruption. The conditions in the hospital, which was already suffering from neglect when the fire broke out, drew widespread condemnation from many Iraqis at the time[61].

An overly–complex bureaucracy can also lead to systemic inefficiencies and inconsistent processes that can make assessment of needs and impact more difficult. This paper itself demonstrated this issue when it sought to identify the numbers of active hospitals and primary healthcare centres, only to find highly inconsistent numbers for them. By streamlining the bureaucracy and creating modular processes for data collection and assessments, such inconsistencies can be reduced, allowing the Ministry of Health to allocate funding with better understanding of the demands and needs involved.

Brain Drain and Lack of Doctor Safety

As mentioned above, the lifting of restrictions on emigrating medical professionals in 2004, in conjunction with the subsequent violence across the country, has led to the exodus of medical professionals. By 2013, much of the exodus had slowed down. However, the emergence of the IS and the subsequent conflict has resulted in a new wave of brain drain in 2014. Many of those who left did not just flee the conflict, but also left due the endemic corruption and lack of prospects for professionals in Iraq as a result of corruption and general lawlessness[62]. At present, no specific statistics exist on how many medical professionals have left Iraq since 2014, but some estimates put the number in the

61. «At least 12 babies killed in Baghdad hospital fire», Al-Jazeera, 10-August-2016, <https://www.aljazeera.com/news/2016/08/11-babies-killed-baghdad-hospital-fire-160810063620919.html>, [Accessed 12-March-2018]
62. Morris, Loveday. «Iraq fears a 'brain drain' as educated young people head to Europe», The Washington Post, 05-October-2015, <https://www.washingtonpost.com/world/iraq-fears-a-brain-drain-as-middle-class-young-people-head-to-europe/2015/10/05/77d26ee4-620f-11e5-8475-781cc9851652_story.html?utm_term=.c5a8fe2018a1>, [Accessed 13-March-2018]

thousands, putting a serious strain on the system[63]. The accounts of these individuals suggest that in addition to reducing the threat of IS (which has, for the most part been achieved), reducing corruption and lawlessness is also an imperative.

There is, however, one specific threat that is faced by medical professionals, compelling them to seek new lives: tribes and militias. The exact nature of the threat varies. Members of tribes, for instance, have been known to exact revenge on doctors if a tribal patient dies, even if the doctor has done all they could to save the patients. Militias, in turn, have been known to demand preferential treatment, at times even demanding that doctors abandon their current patients for treatment[64]. Although the weakened power of the Iraqi state after 2014 has contributed to tribal and militia impunity, the problem was one that existed even before. Regardless, the worsening situation after 2014 has resulted in many doctors giving up on their professions. Ensuring that such groups do not violate Iraqi laws with impunity is key to ensuring that doctors can perform safely, thus in turn, key to retaining them.

The National Health Service of the United Kingdom: A Background

The UK has had some form of social healthcare since the implementation of the Poor Law in 1601 by Queen Elizabeth I, taking away some of the responsibility of providing care that belonged to religious orders.[65] Outdoor relief was the "main source of state-sponsored care until the 19th century".[66] This form of relief provision

63. Ibid.
64. Bradley, Matt. «Iraq's Doctors Face Threats of Violence», The Wall Street Journal, 01-May-2016, <https://www.wsj.com/articles/iraqs-doctors-face-threats-of-violence-1462145946>, [Accessed 13-March-2018]
65. Greengross et al. "The History and Development of the UK National Health Service 1948 – 1999" Health Systems Resource Centre, 1999, p. 5.
66. Ibid.

was then abolished and replaced by workhouses, which provided rudimentary care to the poor. With the development of the medical sciences in the 18th and 19th centuries, local authorities began to establish hospitals for infectious diseases and other institutions that treated people for disabilities.

The foundations of the modern health service in the UK were laid down at the turn of the 20th century, when the family doctor service was introduced and funded through insurance schemes. A scheme to provide a "panel" of local doctors (General Practitioners), called the panel system, was extended to all working men in 1911 under Prime Minister David Lloyd George.[67]

Just before the onset of Second World War, the British government took its first step towards forming a fully-fledged nationalised health service with the establishment of the Emergency Medical Service in 1938.[68] It was created in anticipation for the casualties that the war was expected to bring about.

In the aftermath of the Second World War, the Labour, socialist government at the time founded the UK's NHS (National Health Service). This was the first time that a UK government assumed responsibility for providing and guaranteeing basic levels of health and social care, which extended to the whole population of the country.[69] It would provide universal care, free at the point of use, and funded by general taxation.[70]

In practical terms, the state nationalised hospitals, which were previously managed by voluntary organisations and local government.

67. Ibid.
68. Ibid.
69. Ibid.
70. Gorsky. "The British National Health Service 1948-2008: A Review of the Historiography" Social History of Medicine, 21(3), 2008, p. 442.

It also created a national network of general practitioners (family doctors), replacing the panel system, who would refer patients on to other health services. The Ministry of Health began the administration of family practitioner services.[71]

The establishment of the NHS, nevertheless, came about after Labour won the political battle over the tenets of its foundation, pitting distributional justice and social solidarity against inflexible bureaucracy and paternalism.[72] This ideological clash between proponents of a centralised healthcare system as opposed to adherents of a more privatised health service based on market economy principles would be, and has since been, a continuing theme in the management of the NHS.

Development of the NHS (1950 – 2008)

1950s

The initial stages of the development of the NHS saw a refinement of the "command and control" structures that would guide central government directives to local hospital boards.[73] Nevertheless, this rigid system was not yet attuned to the needs of the UK's healthcare needs, especially since there was no data or strategy regarding the distribution of resources throughout the different counties of the country. Hospitals were funded based on "historical budgets" in which the amount of money that was allocated was related to the amount allocated the previous year (and not on the basis of need). The difficulties experienced in the 1950s were also compounded by austerity measures

71. Greengross et al. "The History and Development of the UK National Health Service 1948 – 1999" Health Systems Resource Centre, 1999, p. 5.
72. Gorsky. "The British National Health Service 1948-2008: A Review of the Historiography" Social History of Medicine, 21(3), 2008, p. 438.
73. Greengross et al. "The History and Development of the UK National Health Service 1948 – 1999" Health Systems Resource Centre, 1999, p. 7.

introduced by the Conservative government, which sought to bolster private group practice as opposed to general practice.[74]

1960s

The 1960s saw a dramatic increase in expenditure on national healthcare. New hospital buildings were constructed and novel technology was introduced to hospitals. The NHS assumed more responsibility for the provision of general healthcare with the implementation of Enoch Powell's Hospital Plan of 1962. The Plan specified that large district general hospitals (DGHs), which have between 600-800 beds and serve populations of 100,000-150,000, would be the main providers of inpatient and outpatient care. The Plan also introduced specified norms that would be applicable to the function of all hospitals under the NHS umbrella, such as the number of beds in hospitals per 1,000 people and the definitions for specific services.[75] This led to some other forms of care, including maternity to be included in the service provided by DGHs.[76] Failures attributed to the plan have been argued to be a result of the "short-sightedness" of politicians and the "British Medical Association" who spent on projects based on immediate gains.

1970s

The role of the NHS became clearer in terms of providing a clearer definition of the role hospitals and doctors play in healthcare provision and delineating the scope of its function according to the geographical borders of counties in England and Wales. The management of services was governed by the Area Health Authorities, responsible for populations between 500,000 to 1 million. These, in turn, were

74. Gorsky. "The British National Health Service 1948-2008: A Review of the Historiography" Social History of Medicine, 21(3), 2008, p. 443.
75. Greengross et al. "The History and Development of the UK National Health Service 1948 – 1999" Health Systems Resource Centre, 1999, p. 7.
76. Maybin. "The reconfiguration of hospital services in England" King's Fund, 2007, p. 1-2.

subdivided into health districts containing populations of 200,000, which were managed by multi-disciplinary management teams who worked by consensus. This came to be termed "consensus management" in healthcare circles.

The functions of the NHS became more integrated into services provided by other organisations. For example, the healthcare reforms of 1974 established the Joint Committees between the NHS and local authorities, which provided social services, housing and education. This multifunctional and multidisciplinary approach brought representatives from hospitals, general practice, public health, and education to discuss social and health issues at the same table.[77]

An important development in 1975 came with the establishment of the Resource Allocation Working Party (RAWP) which was assigned the task of advising the NHS on how to steer away from historical supply-driven funding to resource distribution that reflected geographical inequalities and needs.[78] This led to changes in NHS funding according to each region.

Furthermore, the role of General Practitioners (GPs) was developed thanks to the creation of an official representative body in 1972 called the Royal College of General Practitioners. Prospective GPs were also provided with a 3-year mandatory postgraduate training programme in 1976. The role of primary healthcare providers, such as GPs, was also enhanced thanks to the Alma Ata declaration of 1978.[79]

77. Greengross et al. "The History and Development of the UK National Health Service 1948 – 1999" Health Systems Resource Centre, 1999, p. 9.
78. "Sharing Resources for Health in England: Report of the Resource Allocation Working Party" Department of Health and Social Security, 1976.
79. Goodwin et al. "Improving the quality of care in general practice" King's Fund, 2011, p. 14.

1980s

This decade saw continuous Conservative rule, during which the party's free-market-inclined ideology was injected into the healthcare system through reforms that sought to dismantle the "excess bureaucracy" of the 1974 reforms.[80] A government-sponsored report collated by businessman Sir Roy Griffiths led Prime Minister Thatcher to enact reforms that would lead to a shift in management practices of the NHS – from "consensus management" to "general management". Sir Roy Griffiths himself was a senior manager in the food making industry and sought to introduce management styles common in commercial sectors into the health sector. The main changes that were experienced by the NHS' management system are as follows:

- Operational units (hospitals, community health services) were allocated budgets for all of their operations (general management) rather than having budgets set for specific functions (consensus management)

- Investment in management information systems that improve decision-making by managers (introduction of business management practices in healthcare provision)

- Closure of hospitals (austerity)[81]

- Support for private sector involvement through contracting support services and promoting private medical insurance (PMI)[82]

Free-market principles continued to be incorporated into the healthcare system following the drafting of the White Paper "Working for Patients" in 1989. This set of proposals were aimed at bolstering

80. Greengross et al. "The History and Development of the UK National Health Service 1948 – 1999" Health Systems Resource Centre, 1999, p. 10.
81. Ibid, p. 11.
82. Gorsky. "The British National Health Service 1948-2008: A Review of the Historiography" Social History of Medicine, 21(3), 2008, p. 446.

the business-like management practices within the NHS, meant to improve efficiency of service delivery. Healthcare Trusts were formed and a competitive market environment gradually began to develop, with the idea that this would incentivise hospitals to provide high-quality service for monetary profit.[83]

There was no pilot programme to test these reforms, but, nevertheless, the White Paper proposals were implemented in 1991, initiating a process of gradual privatisation.

1990s

The 1990s saw the development of what the UK media and academic literature called the "internal market" within the NHS.[84] Elements of the consensus management that was developed in the 1970s were dismantled, leading to a system in which healthcare providers, ministerial institutions linked to healthcare (e.g. Department of Health), independent organisations (research, charity), and organisations from other related sectors (e.g. education, social care) were separated and atomised in the name of "positive competition" and "improved efficiency". The emergence of the internal market was meant to cleanse the NHS of its excessively bureaucratic elements and transform it into a system that would supply for the demands of its "customers" (i.e. patients).

Significant reforms include:

- Budgets for Health Authorities allocated on the basis of population size, age, and performance (competition for funds meant to incentivise higher performance)

83. Ibid, p. 12.
84. http://news.bbc.co.uk/1/hi/health/background_briefings/your_nhs/93732.stm, BBC News, 1998

- GP fundholding – Voluntary scheme allowing GPs to purchase services themselves and create direct relationship between patient and GP, circumventing Health Authorities[85]

- Formation of NHS trusts – semi-autonomous, business-like organisations permitted to raise income through commercial ventures[86]

1997 – 2008 (New Labour)

Elements of the internal market were dismantled:

- Formation of primary care groups (PCGs) to commission healthcare for populations of around 100,000

- Abolition of GP fundholding

- Redevelopment of ties of cooperation between trusts, primary care groups, health authorities and social services[87]

- NHS trusts remain as employers but not permitted to have their own terms and conditions of employment[88]

Nevertheless, other aspects of the market continued to survive. For instance, the split between purchaser and provider of healthcare services was conceded to be conducive to a balanced allocation of resources.[89]

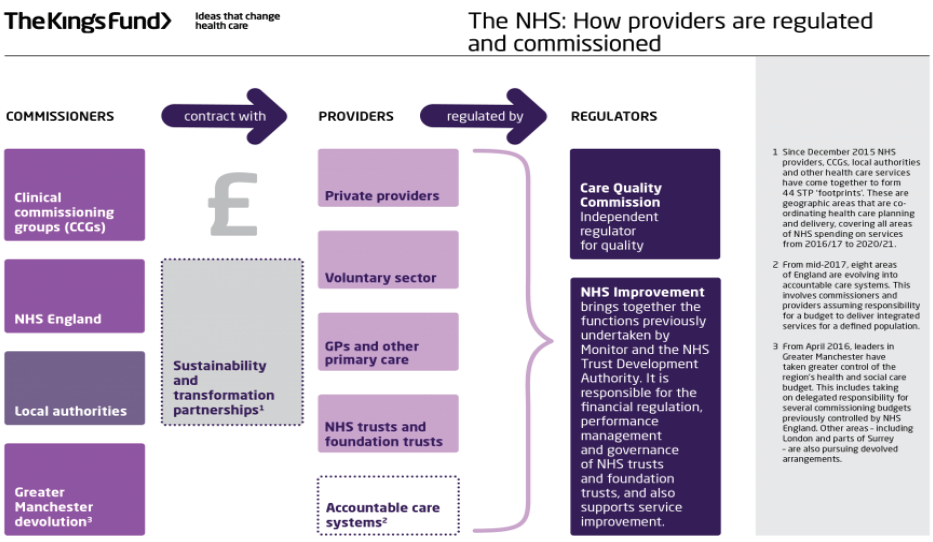
The reforms under new Labour saw a "softening" of the internal market, which led to the perception that the healthcare sector represented a "consumerised mixed economy"[90], mixing market and

85. Greengross et al. "The History and Development of the UK National Health Service 1948 – 1999" Health Systems Resource Centre, 1999, p. 13.
86. Ibid, p. 14.
87. Ibid, p. 20.
88. Ibid, p. 33.
89. Ibid, p. 35.
90. Gorsky. "The British National Health Service 1948-2008: A Review of the Historiography" Social History of Medicine, 21(3), 2008, p. 448.

statist principles.

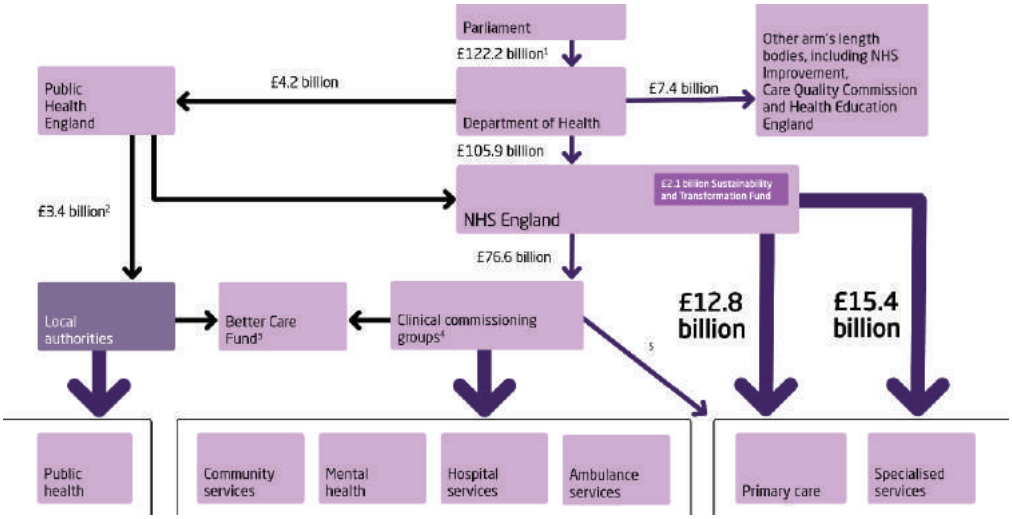
The NHS today

Structure



91

91. https://www.kingsfund.org.uk/audio-video/how-new-nhs-structured, The King's Fund, 2017



The King's Fund

As can be seen from the diagram above, the total budget for healthcare in the UK last year amounted to £122.2 billion. This represents approximately 18% of the total annual expenditure of the UK government.

As has been the case now for a number of decades, the Department of Health is at the head of the healthcare system, providing a strategy and guide for healthcare provision. It allocates money to the NHS, which then distributes these funds to local health authorities, commissioners and health providers.

GPs are the first point of contact for patients. Most GPs work privately, but under an annual national contract.[92]

Since the enactment of the Health and Social Care Act of 2012, primary care trusts (PCTs), which commissioned health services, were effectively replaced by clinical commissioning groups (CCGs). All of

92. Boyle. "International Profiles of Healthcare Systems" The Commonwealth Fund, 2010, p. 20.

the GP practices in England are now part of CCGs.

Statism vs Marketism

Much of the political battle over healthcare provision policy and management has been attributed to the ideological clash between statism (centrally planned management and distribution of resources) and marketism (private provision of healthcare within a market where organisations compete for provision). England has been somewhat of a testing ground for these two approaches for healthcare provision as the alternating Labour and Conservative governments have incorporated both approaches into their healthcare policy agendas. The following is a discussion of the successes and failures of both approaches, in both theory and practice.

The structure of the internal market was introduced to the NHS by the Conservatives in 1991.[93] They saw the decades of central planning as a rigid bureaucracy that needed to be freed up so that that patients' needs may be more efficiently met by the capabilities of healthcare organisations. Patients were thus rendered as quasi-consumers and their preferences, or perceived needs, would be measured according to their demands in the market. This development, nonetheless, would monetise the health system and render it a quasi-commercial market, akin to other sectors in the economy.

This is in contrast to the universality of public healthcare, which provides insurance for all citizens of the country, as opposed to the individualist nature of private healthcare insurance, which renders people customers and leads to more inequity, but provides them with more options.

93. Gubb & Meller-Herbert. "Markets in Health Care: The theory behind the policy" CIVITAS: Institute for the Study of Civil Society, 2009, p. 14.

Disadvantages associated with the central command system have revolved around the rigid nature of management and the many layers of decision-making. During the era of consensus management, decisions were difficult to arrive at since there was no general management to provide leadership and make executive decisions.[94] Nevertheless, the idea of consensus allowed health authorities and health providers to cooperate with one another without having to compete for patients and for funding.[95]

The following is a number of market failures associated with private healthcare insurance and the internal market within the healthcare system:

- Adverse selection: people know more about their health than insurers so insurers would increase premiums just in case their customers are unhealthy.

- Moral hazard: an individual who is insured may take more risks with their health as they can fall back on insurance cover.[96]

- Risk selection: insurers have more knowledge about "products" they are selling to customers so they may refuse to insure unhealthy patient who pose risks and they may seek healthier patients who would cost them less.[97]

- Asymmetric information: people have a lack of information with regards to choices that affect their well-being.[98]

- Supplier-induced demand: doctors may have the incentive of creating unnecessary demand for patient customers to gain more

94. Greengross et al. "The History and Development of the UK National Health Service 1948 – 1999" Health Systems Resource Centre, 1999, p. 9.
95. Ibid.
96. Ibid, p. 29.
97. Ibid, p. 30.
98. Ibid, p. 31.

business.[99]

There have nevertheless been a number of advantages that have been reported about the internal market. The introduction of the division of labour between purchasers and providers of healthcare has supposedly afforded hospital management teams with greater flexibility in terms of adopting innovative working practices and planning services more "rationally".[100] In addition, the philosophy that resources should be allocated according to demand meant that there was a push for purchasers to assess region according to population need and to monitor and evaluate the specification of services that have been set up to meet that demand.[101] In any case, there has been a blurring of people's needs as opposed to their demands. Those with higher financial capabilities tend to demand higher quality, which, in turn, gradually turns into need.

As for the financial incentives that were introduced in the internal market, especially for GPs under the GP fundholding scheme, there are again noteworthy advantages and disadvantages linked to those incentives. Under the fundholding scheme, family doctors (GPs) were permitted to receive a budget for financial management, in addition to the budget they would receive for primary care. In other terms, GPs then became purchasers as well as providers of healthcare and they would compete for funding. Studies have shown that GPs did indeed respond to such financial incentives as they attempted to improve the efficiency of their service in order to receive more funding.[102] Nevertheless, the scheme did prove to be the cause of creating greater inequalities as patients that visited GPs who were not part of the fundholding scheme

99. Ibid, p. 32.
100. Greengross et al. "The History and Development of the UK National Health Service 1948 – 1999" Health Systems Resource Centre, 1999, p. 17.
101. Ibid, p. 18.
102. Croxson et al. "Do doctors respond to financial incentives? UK family doctors and the GP fundholder scheme" Centre for Market and Public Organisation, 1998, p. 17.

did not have access to as much funding for treatment.[103] In addition, GPs in fundholder practices were free to use their additional funds as they wished, so this did not always equate to better provision of healthcare for their patients.

All in all, the UK Government has attempted to include market elements in an NHS that had been run from a central command for decades in order to better meet patients' demands and to help foster innovation. The main focus has been on decentralisation and devolvement of services to local organisations (trusts and commissioning groups).[104] In addition, a contractual system was introduced, in which providers would compete for contrasts based on the quality of the service that they provide.[105] Nonetheless, the market elements have been greatly regulated. The NHS still provides universal coverage and NHS providers are paid a flat rate for their services. These providers only compete for funding based on the quality of their service, and not on price[106], thus restricting the classic model of supply and demand. Market elements within a healthcare system would not work if there is no regulatory framework to control the market (i.e. to avoid monopolies of healthcare providers, to resolve disputes between purchasers and providers, protect universal coverage, ensure transparency of information).

Furthermore, introducing market elements into a healthcare system that is undergoing a restructuring process and one in which organisations do not have full control of their assets would lead to a dangerous scenario. This is because a sudden economic liberalisation of a precarious system would mean that both patients and healthcare providers would not be

103. Ibid.
104. Gubb & Meller-Herbert. "Markets in Health Care: The theory behind the policy" CIVITAS: Institute for the Study of Civil Society, 2009, p. 53.
105. Ibid, 54-5.
106. Ibid, 57.

protected and those competing for contracts would have few barriers that would prevent them from monopolising healthcare provision – a situation that is conducive to unbridled corruption.

Other European healthcare systems

In Nordic countries, such as Norway, the healthcare system is similar to the NHS in the UK, but with one notable difference. Funds for healthcare providers are raised through local taxes, not simply through central government.[107] This is said to afford the local health authorities legitimacy and more of a democratic mandate in their activities. In the case of Norway, it is an experienced dramatic economic growth from the 1970s thanks to its oil production.[108] As is the case in oil-rich countries, there is a certain susceptibility to misuse the large amount of money raised through oil exports and to suffer from 'Dutch disease' (i.e. failing to diversify the economy). Norway has thus put a strong emphasis on what it calls "responsibility management".[109] There has been a strong emphasis on the management of hospitals in political discussions. Healthcare policy issues are made to be frequently discussed in political and public spheres so as to consistently hold those receiving funding for healthcare provision accountable.

Other Western European countries have more plurality in healthcare provision as they are more open to market elements. In France and Germany, health insurance is paid according to employed people's wages.[110] In the Netherlands, citizens pay for health insurance from private insurers. Healthcare is "regulated publicly and provided

107. Ibid, 47.
108. Ringard et al. "Norway: Health system review" Health Systems in Transition, 15(8), 2013, p. 5.
109. Byrkjeflot "The Rise of a Healthcare State? Recent Healthcare Reforms in Norway" Stein Rokkan Centre for Social Studies, 2005, p. 26.
110. "International Profiles of Health Care Systems" The Commonwealth Fund, 2010, p. 2.

privately.[111]

Innovative NHS solutions to healthcare issues

Role of the patient

For a number of years now, the NHS has put an emphasis on the active role that patients may play in improving the services and treatments to which they have access. The idea of "patient leadership" is an emerging concept[112] in the NHS and has already yielded positive results. Patients are the ones who experience healthcare and up until now have been the "objects" of it. The essence of this concept lies in the notion that patients should be treated as subjects who can identify ways in which the experience of healthcare provision can be improved in order to better meet the needs and demands of patients. In effect, patient leaders have the "permission to act" and influence the priorities of health services, in addition to assisting in the design of services on the ground.[113]

Patient leaders are volunteers who are initially trained to understanding the workings of NHS Trusts. They would then have the ability to identify problems from the view of a patient and share this perspective with colleagues who are ingrained in the healthcare system and may lack the "outsider's" outlook on healthcare provision. Patient leaders are also trained to develop their leadership and decision-making skills.[114]

The patient leader thus acts as an intermediary between those providing healthcare services and those who receive them. This leads to

111. Ibid, p. 3.
112. "Improving Experience of Care through people who use services", NHS England, 2015, p. 6.
113. Ibid.
114. "Volunteer Patient Leader: concept and role description", NHS Royal Berkshire.

a shift away from one-way communication to a two-way involvement between healthcare providers and local communities. This may not only improve an understanding between the two "sides" but may also provide more legitimacy to the work of healthcare organisations, thus fostering a more democratic environment in which healthcare is provided and received.

Acting on feedback from patients is at the core of this approach. Doctors notice the value of having a patient (leader) in the meeting room as they are then forced to always take into account what the patient might think of their ideas and suggestions. Doctors have often focused too heavily on safety and quality and forget the importance of the experience of the patient.[115]

Employees at healthcare organisations have already noticed small changes that have been implemented as a result of proposals made by patient leaders. Here are two examples:

"I could see results happening/changes being made, small changes like more highchairs in reception, using low check in desk so people in wheelchairs can see the receptionists"

"In a hospital trust, a teenage diabetic patient designed a 'teenage' room. Now there are settees – long ones; bean bags, walls with pictures. I had some ideas for the pictures – everything falling into place"[116]

Aside from the role of the patient leader, other patients also have a part to play in the formation of organisational healthcare policy through the responses they give to surveys and interviews. Healthcare organisations in the NHS use both quantitative and qualitative data as feedback, based on which they introduce reforms to their practices. It is important to

115. "Improving Experience of Care through people who use services", NHS England, 2015, p. 19.
116. Ibid.

develop the means of gathering and processing data in order to then act on that feedback. The use of social and digital media for gathering data has gained popularity among healthcare organisations recently.[117] This is in addition to surveys and questionnaires that patients fill out after their treatments. The most salient tool used by the NHS to gather feedback is The Friends and Family Test (FFT), which asks patients whether they would recommend the services they have used.[118]

Patients are also being given more opportunity to interact with their local health organisations as a digital interface is being developed that would allow people to access and interact with their individual health records online.[119]

Disabilities

The UK is the first country to legally recognise and give rights to disabled people, following The Chronically Sick and Disabled Act in 1970.[120] Healthcare policy that addresses issues faced by disabled people has developed drastically since then in the UK. Several bills have been passed by the UK government that enshrines the rights of disabled people and their access to healthcare. In addition, healthcare policy has focused on breaking down the structural barriers that disabled people face in their full integration into society.[121]

The strategy for disabled people for over a decade has centred around 3 core principles:

- Independent living

117. Ibid, p. 21.
118. "Putting Patients First: Business Plan 2014-15 to 2016-17" NHS England, 2014, p. 22.
119. Ibid, p. 42.
120. "A Disability History Timeline: The struggle for equal rights through the ages" NHS, 2013, p. 13.
121. Ibid, 14 – 17.

- Support for families with young disabled children
- Transition into adulthood[122]

One important initiative proposed by the UK Department of Health has been the introduction of "individualised budgets", wherein local authorities would provide direct payments to disability patients or to carers looking after them.[123] The complexity of bureaucracy through which disabled people have to pass in order to receive additional aid would thus be circumvented through the provision of individualised budgets. Disabled people would be free to use their aid of their own accord and would thus encourage them to lead a more independent life. Other forms of help that empower disabled people are publicly provided, for instance special transport for disabled people, access to buildings, special housing provisions etc. Families with young disabled children are allocated extra support through the provision of assistive technology and specialist equipment.[124]

Another significant aspect of public provisions for disabled people is the Access to Work programme. This programme helps to break down the barriers to work that disabled people face by providing special equipment or support at the workplace, as well as providing transport to and from work. It also gives disabled people the opportunity to raise objections to employment discrimination as well as providing a channel for them to make demands for "reasonable adjustments" to ensure that they are not "substantially disadvantaged" at the workplace.[125]

Furthermore, there is a strong emphasis on defining the specific needs of different kinds of disability patients, as well as valuing mental and physical health equally. For example, the Child and Adolescent

122. "Improving the life chances of disabled people" Prime Minister's Strategy Unit, 2005, p. 7.
123. Morse. "Personalised commissioning in adult social care" National Audit Office, 2016, p. 5.
124. "Improving the life chances of disabled people" Prime Minister's Strategy Unit, 2005, p. 14.
125. "Get help at work if you're disabled or have a health condition (Access to Work)" https://www.gov.uk/access-to-work.

and Mental Health Services (CAMHS) have opened new psychiatric and non-psychiatric wards for children, since they used to be placed in adult wards.[126] This allows children to be treated according to their own specific needs, and it may also reduce overcrowding in wards that contain people with all sorts of different problems.

Waste, Water and Fire Safety

Environmental waste and the safe management of its removal is an issue that is taken very seriously by the Department of Health in the UK, due to the severely damaging effects that waste may have on people's health and the environment. There are several regulations and procedures to which healthcare organisations abide in order to ensure the safe removal of hazardous waste.[127] All premises in England and Wales that produce or hold hazardous waste are obliged to be registered with the Environmental Agency (EA), which is the primary environmental regulator.[128] One important aspect of waste regulation is the strict classification of separate types of waste. All waste products are categorised and colour-coded according to the European Waste Catalogue (EWC).[129]

The process of disposing of waste is filled with necessary checks and procedures, which cover everything from transport of hazardous materials, to their usage, and finally to their disposal. Such procedures include the following:

"Training and information, personal hygiene, segregation of waste, use of personal protective equipment, immunisation, appropriate

126. "Putting Patients First: Business Plan 2014-15 to 2016-17" NHS England, 2014, p. 18.
127. See following link for full list of waste products and waste regulations: http://www.legislation.gov.uk/uksi/2005/894/contents/made.
128. "Environment and sustainability: Health Technical Memorandum 07-01: Safe management of healthcare waste" Department of Health, 2013, p. 11.
129. The EWC can be accessed here: https://www.sepa.org.uk/media/163421/ewc_guidance.pdf.

procedures for handling waste, appropriate packaging and labelling, suitable transport on-site and off-site, procedures for dealing with accidents, appropriate treatment and disposal of waste"[130]

Hazardous waste requires a clear definition and procedures for their containment and disposal must be defined according to the severity[131] and elements of the substances, with clear and distinguishable labels.

Water systems in healthcare premises also follow strict guidelines and regulations. Water supply for each building differs according to geography, needs and finances.[132] There are guidelines and regulations that address the following issues: materials for water systems, metal contamination, water softening, water storage, pipeline installations, water economy and conservation, installation, and documentation.[133]

The issue of fire safety is also an integral part of healthcare provision. In order to minimise the risks of outbreaks of fire, hospitals have special mechanisms set up to prevent the emergence of such risks. Fire safety requires a combination of "physical fire precautions" and "effective management".[134] There is a Firecode that sets out the specific procedures that healthcare organisations are obliged to follow.[135] It provides guidance on the design, installation and operation of technology used to minimise the risk of a fire.

130. "Environment and sustainability: Health Technical Memorandum 07-01: Safe management of healthcare waste" Department of Health, 2013, p. 15.
131. "Biological agents: Managing the risks in laboratories and healthcare premises" Health and Safety Executive, 2005, p. 12.
132. "Health Technical Memorandum 04-01: Safe water in healthcare premises" Department of Health, 2016, p. 13.
133. The specific regulations and guidelines can be accessed here: https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/524880/DH_HTM_0401_PART_A_acc.pdf.
134. "Health Technical Memorandum 05-01: Managing healthcare fire safety" Department of Health, 2013, p. 1.
135. The Firecode can be accessed here: https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/148481/HTM_05-03_Part_F_Final.pdf.

Lessons from the NHS: Towards a New and Improved Iraqi Healthcare Sector

Economic and Bureaucratic Management

The experience of the NHS with regards to the economic management of a healthcare system provides us with a useful example thanks to the many "tests" that have been done on the NHS in terms of shifts between statism and marketism. After the Second World War, the focus was on building hospitals that would serve local populations and institutions that would supervise, do research on, and provide advice to the healthcare system, such as the British Medical Association.

Public hospitals have been the mainstay of healthcare provision in the UK, both inpatient and outpatient, since the establishment of the NHS. Local NHS Trusts and other Health Authorities are devolved entities that manage the provision of healthcare in local communities. The most successful era of cooperation between the different entities in the NHS is said to be the period of "consensus management", wherein healthcare, social and education services were integrated and their institutions used a multi-functionary and multidisciplinary approach to bring representatives from all these sectors together.

One other important development over the 1970s came with the Resource Allocation Working Party (RAWP), which shifted allocation away from historically supply-driven funding to resource distribution reflecting the needs of each region of the country, closing the gap between the existing inequalities between the regions.

It is highly advised that Iraq provides a basic and universal health insurance for all of the country's citizens. The ruined infrastructure, unstable political and security situation, widespread corruption, and the lack of regulatory forces mean that the economic liberalisation

and privatisation of elements of the healthcare system is discouraged. Nevertheless, according to the UK experience, the high level of bureaucracy that statist policies have encouraged has prevented the development of healthcare solutions depending on specific contexts. The solution to rigid bureaucracy in the UK has been the introduction of the internal market, but this has yielded few positive results and instead has led to a crisis of management, inequality and funding deficits in deprived areas.

In the case of Iraq, privatisation would have an even more detrimental effect. The liberalisation of healthcare organisations would allow for an increase in profit-making and financially corrupt behaviour, due to the lack of regulated market elements in the sector and the Iraqi economy in general. The focus should in turn be placed on devolving public services, providing legitimacy to the work of local healthcare institutions, while following a set of national guidelines and regulations, without the local institutions having to accept all directives from a central command if not seen fit in the local context.

The aforementioned example of Norway would provide a useful template for Iraq, especially due to the similar nature of their oil-producing economies. As mentioned before, funds for healthcare providers are raised through local taxes and not entirely through central government. In addition, in order to hold health institutions accountable, public debate and media attention on their activities has become of primary importance in Norway over the past few decades. Patients under the age of 16 have free access to healthcare while adults pay an annual fee which then grants them full access to healthcare.

The application of the Norwegian model would help towards countering the cumbersome nature of the central-led management model that has been the reality of the healthcare sector in Iraq since

the 1980s. By empowering the local Directorates of Health, each governorate would be able to take better care of its facilities, providing faster maintenance and improvements to existing facilities. It would also alleviate some of the existing problems regarding the uneven spread of facilities and professionals, particularly in southern Iraq.

The aspect of holding healthcare facilities more accountable through local governance would also help alleviate corruption, especially if the local Directorates are required to put out detailed breakdowns of their budgets and spending. There is a common perception in Iraq that many "elites" and members of the central government are not motivated to fight corruption or improve hospitals because they can easily seek treatment outside of Iraq[136]. Whether this specific perception is true or not, corruption is a very real problem in Iraq, having led to the loss of billions of dollars earmarked for reconstruction since 2003[137].

Devolving central control to local administrations would also help cut down some of the unnecessary bureaucracy. Institutions such as the World Bank and the International Monetary Fund have both remarked that administrative budget takes a disproportionately oversized portion of the overall healthcare budget[138]. Thus, although the Iraqi healthcare sector is one of the sectors that receives the least funding, the primary source of financial deficiency is not necessary lack of funding but the loss and misallocation of the funding.

136. Hadad, Hamzeh. "Iraq›s Ailing Healthcare", 1001 Iraqi Thoughts, 11-May-2017, <1001iraqithoughts.com/2017/05/11/iraqs-ailing-health-care/>, [Accessed 17-March-2018]
137. Fuller, Desmond. «Iraq's billions of $ lost to corruption thanks to Ministry of Health's failed hospital projects», Medium, 22-March-2018, <https://medium.com/@desmondfuller/iraqs-billions-of-lost-to-corruption-thanks-to-ministry-of-health-s-failed-hospital-projects-3570656f04f8>, [Accessed 22-March-2018]
138. «Republic of Iraq Public Expenditure Review», World Bank Group, 2014, p. 14

Patient Feedback and Experience

The role of the patient in the healthcare system has been neglected in Iraq and there is little tradition of using patient's opinions with regards to the provision of treatment in order to improve those services. After decades of developing the foundations of the NHS in the UK, the Department of Health has exerted much effort recently to develop the role of the patient so as to improve healthcare services.

One recent innovation that would be of use in the Iraqi context is the emergence of "patient leadership". Since there are several ongoing volunteering initiatives in Iraq revolved around reconstruction, this can be expanded to the healthcare sector. The NHS hires patient leaders, who are simply interested members of the public, as volunteers, and they are trained to become acquainted with local healthcare institutions. Having received the training and after developing leadership and decision-making skills, the patient leader then provides their unique insight into the workings of healthcare organisations from the patient's perspective. As demonstrated by the experience of patient leaders in the NHS, they are able to make proposals that would have a positive effect on the experience of patients at hospitals and treatment centres. In addition, they help to provide information about the needs of patients seeking treatment.

Aside from the role of the patient leader, the public as a whole can also play a role in improving the healthcare system, both locally and nationally. Quantitative data systems have been developed in the NHS to gather information about patient feedback, which is normally collected after treatment. Such data systems would provide an extremely useful source of information upon which local and national healthcare institutions in Iraq may act and draft policy. The NHS has also recently emphasised the utility of qualitative data, gathered mainly

through interviews with patients. Although this type of data is difficult to log and process on a large scale, it may be collected at a local level, or even at the level of individual hospitals. The more in-depth nature of qualitative patient feedback may be discussed at local health boards and may provide the basis for a more comprehensive local health policy to solve local health issues.

Disabilities

Due to social and cultural sensitivities regarding the issue of disability, disabled people in Iraq suffer from marginalisation, neglect, and they are faced with serious barriers to entry in education, employment and other areas of life. This is a common symptom of societies around the world and efforts to integrate disabled people into public life have only been seriously considered in the past few decades.

In Iraq, the focus of support for disabled people should begin with providing a basis of social and financial benefits. Public institutions, hospitals, schools and transport system should all have provisions for disabled people who, in many cases, cannot even gain physical access to those public services. Such provisions should be made obligatory in the national legislature of the country, and should be provided locally. In addition, definitions of different types of disabilities should be specified, as well as institutionalising equality of need and support for both physical and mentally disabled people. This may be listed in the form of "national guidelines" that local healthcare organisations must follow. This would form the basis of improved access to education, healthcare and employment for disabled people in Iraq.

In the UK, the Department of Health (DOH) has shifted its focus away from simply providing benefits to disabled people, but has emphasised the need to allow them to lead an independent life with the support of communities and public funding. Due to the bureaucratic

nature of access to healthcare benefits, disabled people are faced with obstacles to finding the means with which they would be able to live independently.

The DOH is thus introducing a new scheme that provides disabled people and, in some cases, families who support them, with "individualised budgets". These budgets are allocated on an individual basis and according to the needs and financial situation of disabled people. These individualised budgets allow disabled people to spend money on care as they wish and on their own initiative, rather than being restricted by the bureaucracy of healthcare and benefits provisions. These budgets are in addition to other forms of public assistance, including special transport for disabled people, access to buildings, special housing provisions, among others. Moreover, there is a specific focus on improving access to work as a way of promoting independent living for disabled people. Public provisions to break down barriers to work must be introduced, including providing disabled people with special equipment and support at the workplace, as well as transport to and from work. It is also advised to provide disabled people the chance to voice their dissatisfaction with any discrimination they may face or to make demands for "reasonable adjustments" that would bridge the gap between them and other employees.

Furthermore, patients with mental and physical disabilities have specific needs. They are normally lumped into the same categories and are treated at the same divisions within hospitals. The NHS has recently begun to assign specific wards for different types of people. This involves differentiating between adults and children as well as between patients with either mental or physical issues.

Drug use

The issue of drug addiction and illegal drug use in Iraq has spiralled out of control in recent years, especially since the spread of IS rule and growth in the illegal drug trade. Iraq can glean a number of lessons from the way in which the NHS deals with drug use and abuse. Despite the significant differences in context, the UK population suffers from a relatively high proportion of drug users and the healthcare system has implemented policies to tackle this issue.[139]

As is common with many of the other solutions to healthcare issues mentioned above, the NHS places importance on definitions. In this case, there are definitions for different types of drugs, their severity in terms of leading to and perpetuating addiction, frequency of use, sense of need or dependence and withdrawal symptoms.[140]

One highly important principle that the NHS upholds is that all drug users who seek treatment are seen to on an equal footing with other patients suffering from any other medical or psychological issues. This is a core tenet linked to the universality of care. The NHS view is that drug addiction is a social issue, not simply an individual problem, and so it requires a social solution. The stress is placed on rehabilitation, not punishment. There are several types of treatment and advice that the NHS efforts with regards to drug use. They include:

- Talking therapies – discussing drug use with a therapist from a psychological perspective
- Treatment with medicines – certain medicines, such as methadone, can substitute drug intake
- Detoxification – gradually reducing the use of drugs under the

139. Roberts et al. "Drug use and dependence" Adult Psychiatric Morbidity Survey, 2014, p. 3.
140. Ibid, p. 8.

supervision of a doctor

- Self-help – joining a support group[141]

These are some of the simple measures that can be taken in Iraq to ease the drug problem. Drug users must not be seen as the source of the problem, instead, drug smugglers should be prosecuted. This should be reflected in the legislature of the country.

Waste Disposal and Environmental Management

There are two main areas regarding waste and environmental management in Iraq that the Ministry of Health can have a direct influence on: Waste produced from hospitals and disposal of hazardous waste from afflicted areas. With regards to the first, Iraq produces 7.2 million cubic metres of waste water a year, much of which comes from government hospitals (5.3 million)[142]. Total medical waste produced each year is 29294.9 tonnes, of which approximately 6400 tonnes is considered hazardous[143]. Waste management policies, particularly with regards to sorting normal waste from hazardous waste, are implemented in over 90% of hospitals and medical centres. However, the fact that some 10% do not implement any such policy raises serious concerns for public health[144]. Furthermore, there are only 76 medical waste processors across the whole of Iraq, more than half of which have either limited functionality or are completely non-functional[145]. This also raises concerns with regards to public health and whether the 90% implementation actually sees 90% proper disposal.

141. https://www.nhs.uk/livewell/drugs/pages/drugtreatment.aspx.
142. «Iraqi Healthcare Statistics 2015», Iraq Ministry of Health, 2015, p. 11
143. Ibid, p. 14
144. Ibid, p. 16
145. Ibid, p. 21

As mentioned above, the UK's Department of Health has some of the most comprehensive health and safety guidelines with regards to waste disposal and environmental protection. These guidelines not only provide information on proper disposal methods but also proper separation and handling of medical waste. In conjunction with the aforementioned economic and bureaucratic amendments that would allow the local Directorates of Health to better maintain existing facilities, following these guidelines will ensure that the disposal of medical waste does not harm and degrade the environment any further. Indeed, wastewater that has been treated can have agricultural and industrial applications, taking pressure off existing freshwater reserves.

The UK Department of Health guidelines and the wider environment agency policies also offer guidance on how to handle and dispose of hazardous chemical and radioactive waste. These guidelines have been vital towards reclaiming and rehabilitating Britain's "brown fields", former industrial zones and estates that have were rendered hazardous due to the prevalence of industrial waste and pollutants in the earth. The guidelines and the wider categorisation of such substances under the European Waste Catalogue[146] that both the Department of Health and the environment agency follow can help Iraqi with identifying, removing and disposing of any hazardous chemical and radioactive substances that may be present in Mosul and elsewhere, reducing long-term health costs and expenses resulting from cancers and birth defects. These guidelines can also help clean up the toxic oil spill that had such adverse effects in Qayyarah and even the spills that still remain around Basra. Such clean-up operations would also allow for the proper identification of the chemicals present, ensuring that the treatment of the afflicted population is more efficient and cost-effective.

146. «Guidance on using the European Waste Catalogue (EWC) to code waste», Scottish Environmental Protection Agency, November 2015, p. 4

Public Health Awareness Campaigns

As mentioned above, although violence makes up for a significant portion of the deaths and injuries in Iraq, the majority of the deaths are linked to lifestyle-related issues such as smoking and obesity. Both smoking and obesity rates in Iraq are high and likely contribute to the prevalence of cardiovascular diseases, cancers, hypertension and other ailments.

Banning certain foods or smoking is not really a viable option: Traditional Iraqi cuisine, while known to be very rich and fatty, is also a cultural institution. Meanwhile smoking, while not as deeply ingrained as a cultural institution, has recently been viewed as an expression of freedom after the IS used violent methods to ban it under its rule[147]. Attempting to regulate or restrict both in the short term would garner significant backlash from the public.

The NHS has attempted to deal with the issue of smoking and obesity, as well as other public health crises with a series of public information campaigns. These campaigns took a multi-pronged approach in informing people of the health concern in question, providing easily-understandable graphs and measures, giving breakdowns of adverse health impacts and informing people of preventative methods and treatment options[148]. Such campaigns were found to have significant impacts on public perceptions of smoking and alcohol, encouraged individuals to self-check themselves for possible signs of cancer more often and increased preventative measures to limit the spread of sexually-transmitted diseases[149]. Similarly, the British Government has taken community-based approaches to encourage healthier diets and more

147. Callimachi, Rukmini. "After ISIS, Smoking Openly to Feel Free", The New York Times, 22-April-2017, <https://www.nytimes.com/2017/04/22/world/middleeast/after-isis-smoking-openly-to-feel-free.html>, [Accessed15-March-2018]
148. «The Effectiveness Of Public Health Campaigns», National Health Service, June 2004, pp. 1-4
149. Ibid, p.

exercise among the population in order to counter Britain's obesity crisis[150]. However, as the British experience with obesity is more linked to fast food, the exact same approach will not suffice in Iraq.

Public health campaigns, however, can also help with the burgeoning drug crisis in Iraq. Public health campaigns such as "Talk to Frank", for instance, informed people of the specific impacts of drugs, both positive and negative, in order to offer a neutral platform to encourage debate while at the same time allowing prospective users to know what they are getting into and how they can be impacted. The campaign also included information on rehabilitation programmes, thus serving to slowly change perceptions on drug use while encouraging users to seek help instead of fearing stigma. Such a programme, however, requires a criminal policy that penalises drug sellers and traffickers instead of users to be effective.

On the whole, however, public information campaigns have been shown to be an effective method of altering public perceptions and behaviour on issues that cannot be directly regulated. Such campaigns can sometimes be expensive, as they require a strong information campaign that needs identifying the audience and tailoring the message to them. However, the medium-to-long term benefits are likely to outweigh the costs.

Patient and Doctor Safety

Although the 2016 fire at the Yarmouk Maternity was an extreme example that displayed the failings of regulatory measures at Iraqi healthcare facilities, their corruption and dilapidation, which endanger patient health, have been long well-known[151]. In contrast, the NHS has a reputation for boasting some of the strongest health-and-safety

150. "Healthy Lives, Healthy People: A Call To Action On Obesity in England", HM Government, 13-October-2011, pp. 29-31
151. Hadad, Hamzeh. "Iraq›s Ailing Healthcare", 1001 Iraqi Thoughts, 11-May-2017, <1001iraqithoughts.com/2017/05/11/iraqs-ailing-health-care/>, [Accessed 17-March-2018]

standards in the world. Much of these standards are also in line with European Union regulations, thus giving a strong mechanism for checks and balances. Although sometimes criticised for being over-regulated, the NHS nevertheless boasts many guidelines that can guide the Iraqi healthcare system towards improving safety standards. With limited resources at hand, priority should be given to immediate dangers such as the occurrence of fires. The NHS Firecode 05-03 that sets out the specific procedures that healthcare organisations are obliged to follow provides a strong foundation to build on. The Firecode provides guidance on the design, installation and operation of technology used to minimise risk of fire. With many Iraqi healthcare facilities in need to rebuilding, the reconstruction period would be an excellent time to implement these measures to cut costs and time.

However, no measures will make positive changes without successful implementation and the avoidance of corruption. The measures mentioned above towards giving local Directorates more responsibility and power to enforce regulations would help towards this goal. Wider projects to reduce corruption will also help towards hospitals and medical facilities with bad practices escaping notice.

The matter of doctor safety is a little more complicated. Threat from tribes and militias is simply not something the UK had to contend with and does not offer immediate guidance. Furthermore, the measures already put in place by the Iraqi Government, such as increased jail time to people who attack medical professionals, have not been successful protecting them so far[152]. A short-term measure would be to not only increase security measures in hospitals (and make them accountable towards preventing attacks on medical professionals). However, in the long-term, attitudes themselves need changing. A public information

152. Bradley, Matt. «Iraq's Doctors Face Threats of Violence», The Wall Street Journal, 01-May-2016, <https://www.wsj.com/articles/iraqs-doctors-face-threats-of-violence-1462145946>, [Accessed 13-March-2018]

campaign targeting tribes and militias that informs them of the adverse impacts threats and attacks are having on the medical service can be one way to approach this matter. Military, religious and tribal leaders command immense respect among local communities in rural Iraq. Reaching out to these communities through such leaders would likely have a far greater impact than a generic information campaign. In conjunction, medical professionals will need to be shown that they can count on the protection of the state, as this trust has been broken in recent years.

Conclusion

This paper sought to analyse the structure and ailments of the Iraqi healthcare system, assessing its main issues and whether the British NHS could serve as a model towards rebuilding the Iraqi healthcare system in a comprehensive and efficient manner that serves the Iraqi people.

Since the 1980s, the system has suffered from gradual decline and outright collapse due to social disorder, conflict, underfunding and corruption. The present state of the system, particularly in western and northern Iraq where IS militants performed a scorched earth policy, is clearly unsustainable.

This paper concludes that the present reconstruction era offers the best opportunity to rebuild the Iraqi healthcare system, framing it as part of the overall reconstruction process. The NHS indeed provides a model for Iraq, particularly with regards to its own journey from a highly centralised system to a more flexible hybrid model that empowers local health authorities. The NHS is well positioned to serve Iraq as a model on several health issues that the country currently faces. However, the NHS model is unsuitable to serve as a model on certain matters, particularly regarding privatisation.

This paper also concludes that a number of issues faced by Iraq, such as environmental degradation and lack of sanitation infrastructure, are beyond the abilities of the Iraqi Ministry of Health. However, as these issues can still have an impact on the health system, the Ministry should push for their resolution through cooperation with other ministries, as well as making preparations for potential health crises.

Rebuilding the Iraqi healthcare system will no doubt be a major challenge, given the many difficulties the country has gone through and is still facing. However, the country once boasted one of the best (if not the best) healthcare systems in the Middle East. By adopting the right model for rebuilding the system and addressing the needs of its population; preparing for a number of looming health crises; and clamping down on corruption and waste, Iraq can once again boast a healthcare system that will be an example for the whole region.