The Regulation and Quality Improvement Authority

Review of the Regional Plastic Surgery Service in Northern Ireland

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The Regulation and Quality Improvement Authority

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RQIA wishes to thank everyone who facilitated this review through participating in interviews or in providing relevant information.

[1] Quality 2020 - A 10-Year Strategy to Protect and Improve Quality in Health and Social Care in Northern Ireland - http://www.dhsspsni.gov.uk/quality2020.pdf

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Executive Summary

This review describes the current plastic surgery service in Northern Ireland and explores current issues for the plastic surgery service, including burns and paediatric plastic surgery. It also assesses the effectiveness and present relevance of regional policy guidance for the provision of the plastic surgery services (A Policy to Make Best Use of Resources in Plastic Surgery and Related Specialties (EUR), 23 *November 2006)* to ensure people have timely access to high quality services.

The view of the review team is that the service contains a large number of dedicated individuals, from all parts of the multidisciplinary team, who are working to provide the best possible service for patients. Clinicians and other team members have a high degree of professionalism and a desire to drive improvement.

The commissioning direction for plastic surgery and burns is set out in the 2007 'Parameters for a Plastic Surgery and Burns Service in Northern Ireland'; however, the review team found that there does not appear to be a current up to date commissioning direction for the plastic surgery and burns service. They concluded that the current systems and structures in place and the limited capacity of the service to deliver are hindering innovation and progress. There were also concerns about morale and resilience within clinical teams.

Currently the responsibility for the commissioning of plastic surgery and burns services is split across a number of different commissioning teams, which can have differing priorities and there is a need for clarity regarding where the overall responsibility for the service lies. It was also clear to the review team that the immediacy of some of the issues reported by clinicians, which could directly impact on patient safety, was not being reflected in any commissioning strategy.

In 2006 the South Eastern Health and Social Care Trust (South Eastern Trust) was identified as the trust with the overall responsibility for the plastic surgery service in Northern Ireland. The service was intended to function as a single service on multiple sites; however the review team considered that this was not happening due to the service being managed by two distinct trusts with separate funding streams.

The service is also not meeting its targets in terms of urgent red flag referrals, nor is it complying with joint orthopaedic/plastic surgery standards. Access to microsurgical breast reconstruction is being limited by the lack of surgeons, and therefore women in Northern Ireland are potentially being disadvantaged, despite the efforts of the plastic surgery service, with the potential for adverse outcomes.

Work has been undertaken, by trusts and the commissioner to revise the 2006 regional policy A Policy to Make Best Use of Resources in Plastic Surgery and Related Specialties (EUR), 23 November 2006. However, at the time of the review the revised policy had not yet been finalised. Subsequently the review team has been advised that publication is now expected to be in the spring of 2017. However the review team considered that the revised EUR policy would not

address the major issues for the plastic surgery service in terms of workload, capacity and issues for plastic surgery trainees.

In summary, the overall finding of this review is that the plastic surgery service needs to be reassessed in the short term to meet increasing demand, while ensuring quality of care and good outcomes for patients and also to protect its status as a training service. It also needs careful long term planning to develop a true single service on a single inpatient site and also to add capacity that will provide the best possible outcomes.

In total 10 recommendations for improvement are identified which must be underpinned by the development and support of strong clinical leadership, alongside clear managerial direction in order to take the service forward in the future.

Section 1: Introduction

1.1 Context for the Review

Plastic surgery is the branch of surgery that specialises in the repair or reconstruction of missing or damaged tissue and skin, usually resulting from surgery, illness, injury or an abnormality present at birth. The main aim of plastic surgery is to restore the function of soft tissues and skin to as close to normal as possible. Although important, the secondary aim is also improving the appearance of the affected body parts. It is important that plastic surgery is not confused with cosmetic surgery, which is surgery undertaken on a healthy person with the sole aim of changing their appearance to achieve a more desirable look.

Burns surgery in the United Kingdom is a sub-specialty of plastic surgery, utilising the same principles of restoring function and appearance but also working in a wider multi-disciplinary and multi-professional team to provide care (and sometimes intensive care) to the victims of burn injury. Because of the highly-specialised skills and facilities involved in burn care, burns services often look after other forms of massive skin or tissue loss such as necrotising fasciitis and toxic epidermal necrosis.

Unlike most surgical disciplines, plastic surgery is technique-based rather than defined by an anatomical area or organ. Plastic surgeons utilise a range of techniques or solutions depending on the condition being treated. There are three main groups of reconstructive methods:

- skin grafts – a procedure that transfers parts of healthy skin from an unaffected area of the body to replace lost or damaged skin, relying on the area that receives the graft to keep the graft alive.
- skin flap surgery – a procedure involving the transfer of a living piece of tissue from one part of the body to another, along with the blood vessels that keep it alive. It is called flap surgery because the healthy tissue usually remains partially attached to the body while it is repositioned, or it can be reconnected to a blood supply in the area where it is placed.
- tissue expansion – a procedure that enables the body to 'grow' extra skin by stretching surrounding tissue; this extra skin can then be used to help reconstruct the nearby area

Plastic surgeons treat a very wide range of conditions from cancers and post-cancer reconstruction and life-threatening burns, to trauma (particularly of the limbs) and congenital anomalies. A small part of the workload involves non-urgent functional conditions such as breast reduction and scar revision.

Patients of all ages present to plastic surgery services, from neonates (cleft lip and palate, spina bifida, limb anomalies) to the elderly (skin cancer, wound healing problems and traumatic injuries) and so there are important dependencies with paediatric anaesthesia, paediatricians and child-appropriate facilities. Despite health and safety advances, many burns and scalds still involve toddlers and young children.

Plastic surgeons undergo extensive training, often acquiring a higher surgical degree (MD, MSc) and must pass the FRCS(Plast.) towards the end of their training before entry onto the GMC specialist register for plastic surgery. They usually belong to the British Association of Plastic Reconstructive and Aesthetic Surgeons (BAPRAS). Patients may be referred to plastic surgeons by another hospital consultant or clinician or by their GP. Plastic surgery has such a wide scope that sub-specialisation is usual for consultants, to maintain their knowledge and skills (e.g. burns, hand surgery, breast or head and neck surgery), however there is a 'core' of general plastic surgery that most consultants would undertake within their practice.

In 2006 a regional policy, A Policy to Make Best Use of Resources in Plastic Surgery and Related Specialties (23 November 2006)[1] endorsed by the then four health and social services boards, and the then Minister for Health in Northern Ireland, was published. The purpose of this EUR policy was to introduce a transparent approach to making best use of resources in plastic surgery and related specialties.

The EUR policy identified the requirement to refer to specialists only those patients who have the greatest clinical reason to see a consultant. It further identified the need to increase the number of patients that the plastic surgery service can treat, along with the requirement for extra investment and a redesign of the service. These changes were to allow the plastic surgery service to see and treat patients with serious or life-threatening conditions quickly and safely.

A package of changes was agreed, including two significant measures:

- development of a single integrated plastic surgery service for Northern Ireland
- a commitment to increase the number of plastic surgeons in Northern Ireland from 7 to 10, bringing the number of surgeons per 100 population into line with regions in England

In response, in 2006, the South Eastern Trust was identified as the trust with the overall responsibility for the plastic surgery service in Northern Ireland. However in 2017, service provision remains split across multiple hospital sites within two Trusts. Burns and specialised paediatric plastic surgery is provided at the Royal Victoria Hospital, and skin cancer and trauma at both the Royal Victoria Hospital and Ulster Hospital. The plastic surgery services in each trust, with the exception of outpatient referrals, continue to be managed separately.

While the appointment of three additional plastic surgeons increased the consultant staffing levels towards those described in England, no further consultant appointments have been made in Northern Ireland since 2010, whereas in England there have been further significant increases in the number of consultant plastics and burns surgeons. In late 2016, proposals for an additional three consultants were approved by the Health and Social Care Board and these are expected to be in post in the first six months of 2017. It should be noted

[1] http://healthinequalities.thehealthwell.info/sites/default/files/documents/10.14655-799178-800228.pdf

however that two of these posts are to replace existing staff members who are retiring.

The demands on emergency and elective plastic surgery services have increased substantially in recent years. Improved techniques and new technologies mean that plastic surgeons can offer more treatment options than before, particularly in the treatment of cancers, serious burns and surgery to repair badly injured or amputated limbs. Other specialists have identified that plastic surgeons can play an important part is problem-solving for their patients, because of their array of techniques and understanding of tissue physiology and anatomy. Some specialists have moved away from offering treatments that plastic surgeons also manage. Patients with serious or life-threatening conditions must take priority and they are therefore treated before those waiting for more routine procedures.

In relation to skin cancer, the South Eastern Trust reports that due to the increasing demand for 'red flag' referrals the service currently has an eight week wait for a red flag referral even for their first outpatient appointment. The trust has experienced a rise of 21% in red flag referrals between 2014-15 and 2015-16.

Peer review processes, for cancer services, carried out in the South Eastern Trust, in 2015 and 2016, have identified red flag referral waiting times for a first outpatient appointment as a serious and immediate concern. The 2016 peer review also identified issues in relation to delay in red flag referrals involving cases of soft tissue sarcoma.

In the South Eastern Trust, the total number of adult and paediatric trauma cases has increased significantly, with attendances increasing from 1,939 in 2009 to 2,767 in 2015, a 43% increase. Paediatric attendances in the South Eastern Trust have also increased by 71% between 2009 and 2015, with at least 75% of these patients needing surgery involving general anaesthesia.

This increasing demand arising from cancer and trauma cases has impacted on the capacity to meet elective non-urgent demand within the plastic surgery service. The capacity to provide timely breast reconstruction, elective hand surgery and adult cleft surgery, has been impacted on significantly, by the increasing number of cancer and trauma cases displacing other activity within the plastic surgery service.

Elective waiting times are also influenced by the increase in emergency medical and surgical admissions throughout the South Eastern Trust, particularly during times of winter pressures. In order to manage the emergency demand, the South Eastern Trust has introduced a weekly cap of elective admissions to manage the short notice cancellation of elective cases.

1.2 Terms of Reference

This review, commissioned by the Department of Health, carried out between September and November 2016, profiles the plastic surgery service in Northern Ireland and identifies issues in relation to current policy guidance and service provision. The terms of reference agreed by RQIA with the Department of Health were:

1. To describe and profile the current plastic surgery service in Northern Ireland compared to similar services in Great Britain.
2. To explore current issues for the plastic surgery service, including burns and paediatric plastic surgery.
3. To assess the effectiveness and present relevance of regional policy guidance for the provision of the plastic surgery services (A Policy to Make Best Use of Resources in Plastic Surgery and Related Specialties (23 November 2006)) to ensure people have timely access to high quality services.
4. To report on the findings, identify areas of improvement and, where appropriate, make recommendations for future plastic surgery service provision in Northern Ireland.

1.3 Review Methodology and Scope

The methodology adopted for this review was designed to gather the views of staff responsible for the planning and commissioning of plastic surgery services, as well as staff responsible for delivering plastic surgery services across Northern Ireland.

The methods used included:

1. A literature review, undertaken for reports on plastic surgery services best practice and recent documents relating to plastic surgery services across the UK.

2. In September 2016 a questionnaire, designed to gather initial pre-review information, was completed by the provider Health and Social Care trusts. This was used by the review team to inform the later stages of the review process.

3. In November 2016, meetings were held with a range of managerial and frontline multidisciplinary staff in order to hear their views on the issues currently affecting service provision and delivery.

4. In November 2016, a further series of information gathering interviews were held with key staff responsible for the planning and commissioning of plastic surgery services. The purpose of these interviews was to evaluate the effectiveness of the actions taken by the commissioner and the arrangements in place for future service delivery.

Each of the interviews used a semi-structured approach, using a list of specific questions designed by the RQIA review team. The findings from each stage of the review were collated and this information has been used to inform this report.

Section 2: Plastic Surgery and Burns Services in Northern Ireland

2.1 The Northern Ireland Regional Plastic Surgery Service

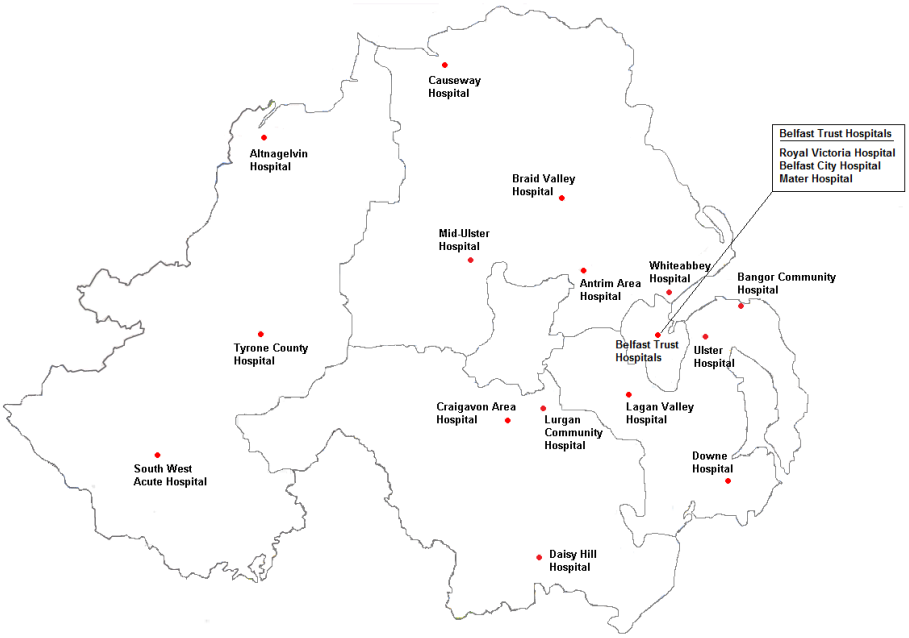
The regional plastic surgery service is intended to be a single integrated service for Northern Ireland; however it is based on multiple sites and is managed by two different trusts; the South Eastern Health and Social Care Trust (South Eastern Trust) and the Belfast Health and Social Care Trust (Belfast Trust).

Inpatient and daycase facilities are provided in:

- The Ulster Hospital, (South Eastern Trust),
- The Royal Victoria Hospital (Belfast Trust),
- Royal Belfast Hospital for Sick Children (Belfast Trust) and
- Belfast City Hospital (Belfast Trust).

The plastic surgery unit provides a regional service for Northern Ireland and is mainly based in the Ulster Hospital (South Eastern Trust). The plastic surgery unit currently has 20 adult inpatient beds shared between plastic surgery and oral and maxillofacial surgery (OMFS), with equal access for both specialties; the number of beds is planned to increase to 24 adult beds in 2017. There is access to intensive care, high dependency unit facilities and paediatric and adolescent facilities.

The plastic surgery service provides inpatient surgery at the Ulster Hospital and day-case procedures and outpatient services across the Ulster Hospital, Lagan Valley and Ards Hospital (in the South Eastern Trust).



Outpatient and daycases are also seen in the Royal Victoria Hospital, Royal Belfast Hospital for Sick Children and Belfast City Hospital in the Belfast Trust.

An outreach outpatient service is provided by the South Eastern Trust to the Southern, Northern and Western Health and Social Care Trusts at Craigavon, Antrim and Altnagelvin Hospitals; however inpatient services are not provided on these sites. If inpatient treatment is necessary it is carried out in the Ulster Hospital.

The main areas of work in the South Eastern Trust are:

- limb and soft tissue trauma
- cancer: skin, head and neck and sarcoma, including post-resection reconstruction
- congenital anomalies (i.e. cleft lip, palate and other facial deformities)
- elective hand surgery
- degenerative tissue conditions requiring reconstruction
- breast cancer reconstruction, congenital breast deformities, asymmetry and other breast conditions
- reconstructive service provided to support other specialities – ear, nose and throat (ENT), oral and maxillofacial surgery (OMFS), gynaecology, general surgery, trauma and orthopaedics and urology
- skin laser service
- microsurgery for trauma and reconstruction

The South Eastern and Belfast Trusts also provide plastic surgery services for other specialties including general surgery, orthopaedic surgery, ENT surgery, dermatology, maxillofacial surgery, urology, vascular surgery, neurosurgery, paediatric surgery, cardiothoracic surgery and gynaecology. This is often in the form of complex reconstruction requiring significant plastic surgical input which may not be included in the measured workload of the plastic surgery service but attributed to the other specialty, even though the major part of the surgery could be plastics.

Additional services are delivered in the Belfast Trust:

- burns
- paediatric plastic surgery
- elective surgery
- support for other services

GPs are the main referral source for the elective plastic surgery service. Patients are triaged and offered either an outpatient appointment, or if suitable, and the patient is agreeable, a red flag patient can be seen by the ‘see and treat’ service. Within the elective pathway there will also be consultant-to-consultant referrals, allied health professional/nurse referrals, direct admission and patients coming from the plastic surgery trauma team.

Emergency admissions to the plastic surgery service can come via several routes including:

- plastic surgery trauma team
- emergency department

- outpatients department
- GP referral
- consultant-to-consultant (tertiary) referral
- allied health professional /nurse referrals
- inpatient transfers from within the South Eastern Trust and other hospitals.

The regional plastic surgery service has the equivalent of ten whole-time consultants (nine working full time and two job-sharing) serving a population of 1.8 million (1 consultant per 180,000).

There are seven full time consultants based in the Ulster Hospital and three whole-time equivalents (four consultants, two of which job share) based in the Royal Victoria Hospital/Belfast City Hospital; nine of the consultants contribute to an on-call rota, covering all inpatient sites.

There are currently ten places for trainees at specialty trainee level and 4 core surgical trainees. There are two staff grade/trust doctors within the service working across both the Ulster Hospital and Royal Victoria Hospital sites.

The seven consultant plastic surgeons based in the Ulster Hospital all provide a service for general plastic surgery/reconstruction and manage skin malignancy. They also have a sub-specialty interest: three are hand/upper limb surgeons, two head and neck oncology surgeons, one breast reconstructive surgeon and one cleft surgeon.

Plastic Surgery Total Consultant Staffing	10 wte Consultants
Subspecialty Areas	
Congenital Deformities including upper limb	4 Consultants although 1 consultant for cleft lip and palate
Breast Surgery Reconstruction, cancer resconstruction, Congenital conditions	3 consultants
Trauma reconstructive repair of trauma including upper and lower limb trauma from open fractures and burn injuries.	8 consultants on the trauma rota; 4 consultants on the burns rota
Skin – excision and reconstruction of benign and malignant lesions.	All consultants carry out skin lesion work. Although 3 consultants have this as their subspecialty area
Cancer – removal of malignant tumours and treatments of and reconstruction after removal of tumours by other specialisms.	Head and Neck Cancer – 3 consultants Breast – 3 consultants Skin – all consultants Neurosurgery – 1 consultant
Hand and upper limb surgery – specialist treatment for function and reconstruction	2 consultants

Source: Health and Social Care Board

Acute trauma is managed in the Ulster Hospital and six of the consultants contribute to a 'consultant of the week' system.

The three full time equivalents (four consultants) employed by the Royal Victoria Hospital /Belfast City Hospital provide a service for the management of adult and paediatric burns patients. They also contribute to the management of skin malignancy, general plastic surgery and paediatric surgery. A single consultant provides a breast reconstructive service and gynaecological reconstruction but not using microsurgical techniques. They can also be called upon to provide assistance to other specialties, as outlined above. In addition to this, two consultants from the Ulster Hospital also provide a regular service to the Royal Belfast Hospital for Sick Children including cleft surgery and congenital hand/hypospadias surgery.

The plastic surgery team includes four physiotherapists (4.62 WTE) and four occupational therapists (4.62 WTE). One of the physiotherapists manages the therapist-led clinic, to review and discharge an agreed caseload of post-hand trauma and post-hand surgery patients. All other therapy staff receive referrals from the plastic surgeons or consultant hand therapists and carry out assessments and appropriate treatment courses aimed at reducing the deficits caused by the condition or injury.

Two consultant hand therapists (one physiotherapist, one occupational therapist) each provide a single-handed service; they coordinate their own leave so that at least one is present during normal working hours and try and ensure that there is senior cover available in both physiotherapy and occupational therapy teams at all times.

The clinical psychology service assesses and provides interventions for patients adjusting to the experience of sudden traumatic injuries, in both an in-patient and out-patient setting as well as for elective procedures. In addition the service supports patients in their coping with hospitalisation, treatment, acute pain, functional change and appearance changes. The service provides specialist assessment regarding suitability for surgery/treatments, consultation and a range of therapeutic interventions. It helps patients manage expectations about surgery and prepare for surgery and offers psychological opinion in relation to procedures for the surgical team. Many of these are provided in a multidisciplinary context, to enable engagement and progress with other interventions, such as hand therapy.

The plastic surgery and maxillofacial clinical prosthetist consultant is responsible for the management and leadership of the regional maxillofacial, head and neck prosthetics laboratory. The service is another single-handed service based on the Ulster Hospital site. It provides clinical, scientific, advisory and support services to patients undergoing reconstructive procedures or rehabilitation following trauma, cancer or as a result of a congenital deformity.

2.2 The Northern Ireland Regional Burns Service

The Northern Ireland Regional Burns Service for adult burns patients, who require inpatient management, consists of an eight bedded ward in the Royal Victoria Hospital. It also houses a burns theatre, which has daily operating lists for managing both acute burns and reconstructive procedures and is used solely by the burns and plastic surgeons.

The Belfast Trust website states that it provides:

- adult burns services: both for acute burns and later reconstruction
- complex skin cancer: including surgical removal and reconstruction
- reconstruction service for breast and gynaecological cancer surgery
- reconstructive service for trauma admitted to other specialties, or complications following surgery

The burns service is not co-located with the Regional Intensive Care Unit, which is where patients with large burns or other complicating injuries may be required to stay, but is a floor below the Regional Intensive Care Unit in the Royal Victoria Hospital. Inpatients, either in the ward or in Regional Intensive Care Unit, requiring surgery for burns have their operation performed in the burns theatre (as above) which has no dedicated anaesthetic room or recovery area. This theatre is also used for plastic surgery patients undergoing non-burns procedures operated on by the plastic surgeons. As such the theatre cannot be described as a truly dedicated burns theatre.

The burns theatre runs six scheduled sessions per week for plastic surgery and burns patients. If further funding was available, additional theatre sessions for burns and plastic surgery patients could be provided within this infrastructure. However, the lack of anaesthetic room or recovery area limits the efficiency of this theatre facility. Swapping between general and local anaesthesia cases has meant that consistent anaesthetic support is no longer provided.

The burns unit is also the location for the burns dressing clinic which runs daily and is the point of referral for new burns that can be treated on an outpatient basis. In addition, there are outpatient burns clinics which are used mainly to accommodate patients whose burns have healed, but require ongoing care, reconstruction and scar contracture release.

Children with burns are seen, assessed and managed on Paul Ward in the Royal Belfast Hospital for Sick Children, and medical staff care for patients in both the Royal Victoria Hospital and Royal Belfast Hospital for Sick Children. Burns injuries are managed by a team of four consultant plastic surgeons; however, because of the complex nature of burns and the physical and psychological impact on patients and their families, the service utilises the expertise of many different specialists.

Burns outpatient referrals are received directly into the burns unit, registered onto the patient administration system, reviewed by a surgeon and appointed to a surgeon's clinic. There is a consultant of the month system where by new burns patients are allocated to a surgeon who will oversee their care. As patients need to go to theatre on numerous occasions and frequently more than once in any week in the acute phase of care, this is accommodated through discussion, multidisciplinary team meetings and the utilisation of the theatre lists by all surgeons. As such, the surgeon operating on the patient may, on occasion, not be the surgeon overseeing their care. The 'overseeing consultant' will follow the patient up at outpatients and provide continuity of long term care. There are also lifelong patients of the burns service who transfer from the paediatric service to the adult service for ongoing secondary burns reconstruction.

Surgeons on both Royal Victoria Hospital and Belfast City Hospital sites receive many requests for consults from other specialities to assess/review patients from a plastic surgery perspective. There is no pathway documented for this process, nor is the activity captured unless the patient is subsequently seen at an outpatient clinic. Treatments provided to these patients will be coded under the main speciality and the plastic surgery input is not reflected in any measures of activity or cost.

All admissions to the burns service are assessed by a multidisciplinary team, including junior and senior medical staff, a burns nurse, burns surgeon, occupational therapist and physiotherapist. A dietician, clinical psychologist, chaplaincy team, social worker and pharmacists are also part of the team.

The burns service has specialised burns occupational therapy and physiotherapy provision. Occupational therapy and physiotherapy provide treatment for patients from admission into the Regional Intensive Care Unit/Paediatric Intensive Care Unit/Burns Unit, through to discharge and often for many years after, providing outpatient treatments and follow up after further reconstructive surgeries.

Burns occupational therapists and physiotherapists are essential for treating inpatients and ward attenders; they work closely together to provide best practice and have their own therapy led clinics; they also provide treatments in the theatre environment. Therapists are available to attend weekly consultant outpatient clinics in both the adult and paediatric burns and plastic surgery service (Royal Victoria Hospital and Royal Belfast Hospital for Sick Children) or they accept direct referrals.

The role of the clinical psychologist is also crucial to the multidisciplinary team providing care. The psychological needs of burns patients are identified in the acute stages of hospitalisation and treatment and can continue to emerge into the rehabilitation/recovery phase. Clinical psychology input is an essential service requirement for this patient group and is offered to both inpatients and outpatients.

Dieticians, speech and language therapists, and social workers are also integral to multidisciplinary team working within the burns unit and input from orthotics and radiography is also necessary on an individual patient basis when required.

Nursing roles include inpatient and outpatient wound care, as well as holistic care for the burn injured patient requiring resuscitation, surgery and rehabilitation. The nursing team has significant knowledge of wound management and provides dressing support for inpatients in other specialties who have had surgical procedures performed by the plastic surgery team. The nursing team also carries out the first dressing following skin graft for plastic surgery skin cancer patients.

Section 3: Findings from the Review

3.1: Effectiveness of the Effective Use of Resources (EUR) policy

In 2006, a regional policy, endorsed by the then four health and social services boards, was put in place: A Policy To Make Best Use of Resources in Plastic Surgery and Related Specialties (23 November 2006[2]). The purpose of this policy, known as the EUR policy, was to introduce a transparent approach to making best use of resources in plastic surgery and related specialties.

The South Eastern Trust told the review team that the plastic surgery service implements the current EUR policy fully, managing the high volume of referrals and vetting these according to the EUR policy. All referrals are triaged by an administration team. If the referral information is incomplete the referrer will be advised that the information provided was insufficient and will be asked to resubmit with the necessary information. Once triaged, a patient will be seen by a plastic surgeon and reassessed against the EUR policy before being placed onto a waiting list for surgery. To date, there has been no formal audit of the impact of the EUR policy or the effectiveness of its implementation in practice.

It was noted that the EUR policy in its current format creates difficulty for both general practitioners and patients. Both general practitioners and patients often feel that the patient warrants the procedure but they do not meet the access criteria, or there is a lack of evidence to demonstrate that patients meet the access criteria. There is an appeals process managed by the Health and Social Care Board. If a GP or consultant considers the patient's situation to be exceptional, they can write to the Director of Commissioning in the Health and Social Care Board, detailing the reason for exceptionality and the benefit of providing surgery. A panel will then be convened to consider the information and to determine if the referral is appropriate.

Work has been undertaken by trusts and the commissioner to revise the current EUR policy, including a regional workshop held in 2012. However, at the time of the review the revised EUR policy had not yet been finalised and the review team was told that it has passed to another department within the Health and Social Care Board. Subsequently the review team has been advised that publication of the refreshed EUR policy is now expected in spring 2017.

Health and Social Care trusts identified several areas, to the review team, where they would welcome further clarity on access criteria, these include:

- scar revision
- management of consequences post bariatric surgery
- impact on waiting lists
- equitable application across trusts
- definition of exceptional circumstances

[2] http://healthinequalities.thehealthwell.info/sites/default/files/documents/10.14655-799178-800228.pdf

The Belfast Trust and South Eastern Trust reported that, despite the implementation of the EUR policy, there remains a significant number of patients requiring major plastic surgery and occasionally redo surgery. This continuing high demand combined with the increase in demand for plastic surgery associated with skin cancer and trauma, places untenable pressure on capacity for both outpatient clinics and theatres.

The review team discussed the proposed amendments to the EUR policy with the commissioner, who advised that its review is being taken forward by the Performance Management and Service Improvement (PMSI) Directorate within the Health and Social Care Board. The review has not yet been completed; however, the revised EUR policy is not expected to change significantly and those changes which have been suggested are, in the main, related to other surgical specialities and not plastic surgery. It was noted that there are likely to be only very marginal changes relating to plastic surgery.

Health and Social Care trusts told the review team that currently only the plastic surgery service is adhering to the EUR policy. This is creating a problem of inequity as patients who are declined by plastic surgery are being referred to a second-choice specialty, which is not applying the EUR policy and so will undertake the procedure, inappropriately.

While the commissioner informed the review team that proposed changes to the EUR policy may not be in areas related to the plastic surgery service, trusts told the review team that one area that will need to be revisited is the criteria for post massive weight loss and post-bariatric surgery, as this is a growing area of demand. The British Association of Plastic, Reconstructive and Aesthetic Surgeons (BAPRAS) in conjunction with the Royal College of Surgeons (RCS), has developed a commissioning guide: Massive Weight Loss Body Contouring[3] (2014). This document, accredited by the National Institute for Health and Care Excellence (NICE), provides guidance for commissioning reconstructive procedures, post massive weight loss and is based on the best available evidence.

The review team considers that the review of the EUR policy should be completed. However, it is of concern that the review of the EUR policy commenced in 2012 which calls into question its continued relevance four years after it took place. When published, the EUR policy needs to be consistently and robustly applied across all relevant surgical specialities.

Recommendation 1	**Priority: 2**
a) The Health and Social Care Board should complete the revision of the EUR policy and ensure it provides clarity in relation to the areas mentioned in the body of this report. b) The Health and Social Care Board should also ensure that the EUR policy is being adhered to by all relevant surgical specialities within trusts and is communicated widely to GPs, provider Health and Social Care trusts and the public.	

[3] http://www.bapras.org.uk/docs/default-source/commissioning-and-policy/body-contouring-surgery-commissioning-guide-published.pdf?sfvrsn=0

3.2 The Development of a Single Integrated Service

The plastic surgery and burns services are presently being delivered by two separate trusts. While the service does work together in a number of areas, the management remains split across the South Eastern Trust and the Belfast Trust, each funded separately and delivering separate service and budget agreements from separate budgets.

The South Eastern Trust manages all the plastic surgery outpatient clinics for the service, booking all outpatient clinics for all consultants regardless of the site they work on, or the state of their inpatient waiting list. It was noted that there is no consideration given to inpatient waiting list size when booking outpatient appointments. The South Eastern Trust told us that information on inpatient waiting lists is not shared with them and so the outpatient waiting lists are managed independently of that information. The South Eastern Trust does not manage the outpatient clinics for the burns service; this is managed by the Belfast Trust.

The burns service is much more distinct from a clinical perspective. The burns service is commissioned separately through an overarching block service and budget agreement between the Health and Social Care Board and the Belfast Trust. The burns service is not under as much pressure from growing waiting lists, due to the variable demand on the service. While the South Eastern Trust does not directly manage the burns service, there is cross-over in that the burns work impacts on the plastic surgery service at times of peak demand, for example a major burn requiring multiple visits to theatre.

The burns service in Northern Ireland should adopt the UK Burn Care Standards to bring the service into line with England and Wales. The burns service will then need to consider if there are sufficient numbers of major burns each year in the region to require a burns centre, or if it would be more appropriate to meet the standards for a burns unit, which is less resource intensive. A partnership for care and training could be established with a burns centre in Great Britain or in the Republic of Ireland.

The review team considered that as a consequence of the service being managed by two separate trusts across two main sites, it is not currently working cohesively as a single service. For example, there is a separate clinical service lead in each trust, reporting through their established and distinct trust governance systems.

It is also apparent to the review team that allied health professional and clinical psychology staff do not work together, or support each other as much as they could if the plastic surgery service were on a single site. This would help the allied health professionals and other professionals to work together as a cohesive unit. In the short-term, staff training and development could be undertaken on a cross site basis, in order to make the single service more resilient.

The review team considers that although the plastic surgery service has been termed a ‘single service’, the way it has been set up and managed across multiple sites and by two distinct trusts means it has never really functioned as a true single service. A partnership board/working group should be established as a

matter of urgency to progress the implementation of a single service model for plastic surgery (including burns) initially, followed by a move to a single site for major inpatient services that takes account of the future direction of burns treatment provision in Northern Ireland and also the fact that paediatric burns treatment will continue to be provided in the Royal Belfast Hospital for Sick Children on the Royal Victoria Hospital site. The review team has since been informed that the Health and Social Care Board has initiated the establishment of a Regional Plastic Surgery Programme Board to address service planning for the plastics and burns service.

Recommendation 2	**Priority: 2**
a) The Regional Plastic Surgery Programme Board should progress the implementation of a single service model, managed by one trust, for burns and plastic surgery in Northern Ireland. b) In the medium term consideration should be given to locating the service on a single site. The working group should decide on the most appropriate site.	

3.3 Service Capacity

Currently the plastic surgery service has ten whole time equivalent (WTE) consultants comprising seven consultants employed by the South Eastern Trust and a further four (three WTE) employed by the Belfast Trust.

These consultants are serving a population of 1.8 million and this staffing complement is not considered sufficient to meet the demands and expectations of the service; equating to one consultant per 180,000 population, compared with British Association of Plastic, Reconstructive and Aesthetic Surgeons (BAPRAS) recommended one consultant per 80,000 population.

The most recent workforce report from British Association of Plastic, Reconstructive and Aesthetic Surgeons (BAPRAS), based on the position in December 2015, identified that 23 consultants in plastic surgery are required - to service a 1:80,000 population ratio. Of note, the table below taken from the British Association of Plastic, Reconstructive and Aesthetic Surgeons (BAPRAS) 2015 Plastic Surgery Workforce UK and Republic of Ireland: Profile and Analysis report describes the current consultant staffing for the service in Northern Ireland as 11 WTE. In fact the service is actually operating on a consultant complement of 10 WTE[4] (11 consultants). This represents a deficit of 12 whole time equivalent consultants in plastic surgery in Northern Ireland.

[4] It was noted by the review team that the figures for Northern Ireland are not correct as it would appear that they have calculated the figures using the headcount of consultants rather than the total WTE. This has been raised with BAPRAS for correction in any future reports.

Total Consultants Required Regionally to service 1:80,000 Population Ratio

Region	FTE Required for 1:80,000 Ratio	Current FTE	Additional FTE Consultants required (2015)
North West	89	55.3	34
Republic of Ireland	57	26	31
East Midlands	57	24.5	32
South East	52	19.6	32
London	103	80	23
East of England	73	53.7	19
West Midland	70	47.7	22
South West	66	44.1	22
Wales	38	17.5	20.5
Scotland	66	50.6	15
South Central	50	39.8	10
Northern Ireland	**23**	**11**	**12**
Yorkshire and Humber	66	63.7	2
North East	32	28.9	3

Source: British Association of Plastic, Reconstructive and Aesthetic Surgeons (BAPRAS) 2015 Plastic Surgery Workforce UK and Republic of Ireland: Profile and Analysis

3.3.1 Waiting Times

The review team was told consistently by staff that there is insufficient capacity to provide a timely elective surgery service because of the increasing demand in skin cancer and trauma. Waiting times have been adversely affected by the year on year increase in emergency medical and surgical admissions, made worse by winter peaks and the capping of elective admissions.

The South Eastern Trust reports that, while waiting times may not be the best indicators for the level of demand for plastic surgery services, the waiting time for new outpatients, daycase and inpatient services has exceeded 52 weeks+ for the last few years. This indicates that the demand for this service continues to grow while the capacity remains static, at best.

Trust targets for plastic surgery outpatients expect that 60% of outpatients are seen within nine weeks. Currently, 50% of plastic surgery outpatients are seen within nine weeks, which includes 'red flag' urgent referrals. Waiting times are calculated on a component assessment and diagnostic basis rather than a total treatment pathway wait.

For those patients seen at outpatients and listed for surgery, the target is to treat 65% within 13 weeks; currently only around 50% of these will have treatment within 13 weeks of being seen. For those patients not seen within these targets, waits can be as long as 47 weeks for an outpatient appointment and over two years for inpatient treatment. This is clearly unacceptable and unsustainable.

In the Belfast Trust, the plastic surgery waiting list consists of patients waiting for breast surgery, core plastic surgery, skin cancer and burns revision surgery. Capacity is a significant issue within the burns and plastic surgery service.

In March 2014, a total of 228 patients were waiting, with the longest wait totalling 52 weeks. In March 2015, the position had worsened and a total of 431 patients were waiting, with the longest wait totalling 98 weeks. March 2016 saw a slight improvement on the previous year with a total of 332 patients waiting, however, the longest wait (for two patients) was 135 weeks.

Some, less complex breast reconstruction is undertaken by breast surgeons in several trusts, including plastic surgeons in the Belfast Trust and South Eastern Trust. There is only a single microsurgical breast surgeon, based in the Ulster Hospital, to deal with the more complex surgical cases. There is no consultant cover when this consultant is unavailable due to leave. Therefore theatre lists are allocated to other specialties, whereas they could be retained for another plastic surgeon to use.

The majority of patients attending the Belfast City Hospital plastic surgery outpatient clinic have breast conditions. As theatre lists are utilised predominantly to undertake mastectomy and immediate reconstruction, Breast Cancer (BRCA[5]) gene positive women (at high-risk of developing breast cancer) and the women listed for delayed reconstruction following previous mastectomy, wait a considerable length of time. There is no microsurgery carried out in the Belfast City Hospital.

The review team was concerned that women in Northern Ireland with breast cancer were not being offered an acceptable or equitable service and the demands on the single surgeon were also unacceptable. The waiting time even for the BRCA gene positive women means some might develop breast cancer before their mastectomy and reconstruction could be performed, which exposes the trust to considerable risk. It would be expected that three microsurgical breast surgeons may be required to provide a comprehensive service, working in collaboration with their general breast surgical colleagues across the region.

At the Royal Victoria Hospital, burns patients in their early stages of care take priority for the theatre capacity. There is a growing demand from urgent and red flag plastic surgery patients attending outpatients at Royal Victoria Hospital and these patients with identified and suspect cancer are scheduled with surgery dates directly from the outpatient clinic. Therefore, the demand for theatre capacity for burns patients and those with cancer/suspected cancer limits the capacity for other elective patients who are added to the waiting list. With limited theatre access the waiting lists grow. These elective patients include those for secondary burns reconstruction.

The Belfast Trust has also highlighted that waiting times within the plastic surgery service and particularly for skin cancers can fluctuate significantly, when the team

[5] BRCA1 and BRCA2 (BReast CAncer genes 1 and 2) are the best-known genes linked to breast cancer risk.

is involved in managing a complex burn patient, who requires multiple visits to theatre for treatment and dressing, over a prolonged period of time. The current service is not sufficiently flexible to manage the demand for the service at these times of increased burns theatre usage.

The review team was told that currently outpatient clinics are being overwhelmed by an increasing numbers of skin cancer and trauma cases. These high demand sub-specialties in terms of meeting targets are masking the activity rates in the other specialist more elective parts of the service where waits are increasing.

Historically, non-recurrent funding has been made available for the use of the independent sector to reduce waiting lists. However the review team was told that the stop/start nature of this funding and the limited range of treatment/surgery provided by independent sector, both impact on the ability to treat the longest waiting patients. The independent sector funding made available in the period December 2015 to March 2016, reduced the total number of patients waiting, but due to the limited service available in the independent sector, it did not reduce the waiting time for patients requiring complex surgery. This has resulted in the South Eastern Trust retaining cases which are more complicated, lengthy and with potentially high morbidity.

The review team considers that the use of the independent sector to reduce waiting lists does not represent best value for money and that it would be considered more beneficial to invest money in the plastic surgery service on a recurrent basis, to allow demand to be met in a sustained and planned way.

The review team was informed by the South Eastern Trust that development of a proposed ‘admission on day of surgery unit’ to open in 2017 will enable the trust to increase its elective throughput; however, currently the service prioritises cancer and urgent inpatients and has focussed on increasing day-case work off site to try to manage the demand within the current constraints.

It was noted that despite the difficulties with waiting times and the consequent delays and cancellation of planned admission, complaints from service users are very low in number.

The review team did acknowledge that since 2007, staffing has increased to a total of 10 WTE consultant plastic surgeons; however as stated earlier these consultants are serving a population of 1.8 million and this staffing complement is not considered sufficient to meet the demands and expectations of the service. BAPRAS recommended figures would indicate that the total number of consultants required regionally to service a 1:80,000 population ratio would be 23 WTEs.

The review team agreed that additional capacity and consultant staffing is required; this is as a consequence of the increasing demand in skin cancer and trauma. Currently the service is not delivering its agreed commissioned activity, particularly in the smaller sub-specialty areas, including breast reconstruction, elective hand surgery and adult cleft surgery.

The review team noted the need for an adequately resourced service to meet the current and growing demand, thus ensuring the appropriate and timely treatment

of patients to ensure better long term outcomes. The review team considers that recurrent funding should be provided for two further plastic surgery consultants immediately to mitigate the increasing demands being placed on the service and while full demand and capacity modelling is carried out. This modelling will need to be sufficiently granular to expose sub-specialty constraints.

Whilst there are many competing sub-specialty demands, consideration could be given to provision of:

- one additional surgeon to ensure that the plastic surgery trauma lists are consultant-led, properly supervised and support a orthoplastic surgery service that is compliant with the joint British Orthopaedic Association (BOA)/ British Association of Plastic, Reconstructive and Aesthetic Surgeons (BAPRAS) trauma guidelines and
- one additional breast micro-surgeon

as these are considered by the review team to be the areas of greatest priority.

There is also an urgent need to identify a sub-specialty lead for each area of specialist practice, to support such a demand and capacity review and to ensure that best practice and training is delivered in the relevant sub-specialty.

The creation of an additional two consultant posts will provide opportunities for the cohort of fully-trained trainees to remain in Northern Ireland and for career progression in the training grades making such posts more attractive to new entrants.

Recommendation 3	**Priority: 2**
The Department of Health should identify recurrent funding to employ two additional plastic surgery consultants for the plastic surgery service in Northern Ireland immediately followed by a full evaluation of the wider resources[6] required for the future.	

3.3.2 Specific Sub-Specialty Challenges

Skin cancer provision: Due to the increasing demand for red flag referrals, the service currently has an eight-week wait for a 'red flag' referral to be seen in an outpatient clinic. The South Eastern Trust has experienced a rise of 21% in GP red flag referrals between 2014-15 and 2015-16 without a similar rise in the incidence of skin cancer. This has an impact on the timeliness for diagnosis, which was reflected in the trusts performance against the 31 day and 62 day standards.

Whilst some skin cancers are relatively indolent, others such as malignant melanoma, some squamous cell cancers and Merkel cell tumour can be aggressive and rapidly growing. Delays of this level expose the trust to

[6] The wider resource requirements may include: additional anaesthetic and theatre sessions, nursing and clerical support. Additional beds and additional allied health professionals to support the subspecialisation or advanced practitioners may be required depending on the service model.

considerable risk because they could have a detrimental impact on patient outcomes and survival.

The review team welcomed an initiative to address this significant demand, by the development in 2015-16 of a new see and treat service by the South Eastern Trust, with the aim of improving access to plastic surgery for patients with skin cancer. The see and treat service is facilitated by a specialty doctor on the Lagan Valley Hospital site. Suspect cancer patients have a consultation, a treatment plan is devised and they are consented and operated on (under local anaesthetic) in one visit. These patients are initially triaged by a consultant and selected based on specific criteria; they are advised of the process and should they wish they can continue on the traditional pathway. This ensures suspect cancer patients are expedited through the cancer pathway.

This particular patient pathway has grown from one see and treat clinic per week to three and the South Eastern Trust is currently giving further consideration to increasing the complexity of patients who can avail of this service. However the South Eastern Trust seemed unsure how much local demand remained to be met.

The review team considered that improvements in the regional skin cancer pathway and care coordination with other members of the multidisciplinary team (e.g. dermatology, radiotherapy and GPs with a special interest) could provide better and more patient-centred management of patients. This could include tele-triage for potential skin cancer patients and development of co-located clinics for plastic surgery and dermatology outside of Belfast. If a patient is referred to dermatology they may have an eight to ten week wait for an appointment. If they then require a subsequent referral to the plastic surgery service they could potentially wait for a further seven weeks. Better coordination and communication between the two services could potentially reduce these waiting times. As another alternative, some patients could also be referred back to their referring dermatologist for their longer term follow up, which is the current model in Wales and some English providers.

It was noted that, at present, the monthly peripheral clinics held outside of Belfast are not timed to appropriately manage the follow up of patients, meaning that all patients are required to have their follow up in Belfast. This is not ideal from a person-centred care perspective, particularly as many of these patients are elderly and frail. In discussions with the review team, trusts indicated that the use of the current ‘see and treat’ resource could be optimised and better utilised, as could other possible models of working, including the opportunities for the use of photo triage. In the future, this service would not necessarily have to be located on a centralised site and therefore has the potential to be provided in facilities local to patients.

There may also be other new opportunities to explore such as nurse-led clinics to provide follow up post-surgery e.g. aftercare and wound dressing. If additional resource was directed to provide more specialist nurse input and to equip nursing staff with the skills and competencies to undertake some follow up management of patients, this could reduce clinicians’ workload. This care could also potentially be provided nearer the patient’s home, if the correct staffing and environment can be secured in peripheral hospital locations or in primary care centres.

While the review team recommends that these approaches are explored by the plastic surgery service to improve patient access to the skin cancer service, they do note that there remains a capacity gap for those referrals not triaged as suitable for the 'see and treat' service.

There did appear to be further potential for 'see and treat' to be developed elsewhere in the region, perhaps in peripheral hospitals, with one day spent doing a clinic and a 'see and treat' list to make best use of travel time.

Recommendation 4	**Priority: 1**
a) Trusts delivering the plastic surgery service (the Belfast and South Eastern Trusts) should consider different ways, including using technology, of providing better access to and better pathways through the service for patients with suspected skin cancer. b) The South Eastern Trust should identify a skin cancer sub-specialty lead to progress this and models elsewhere in the United Kingdom should be reviewed.	

Trauma: The total number of adult and paediatric trauma cases, seen in the Ulster Hospital, has increased significantly over the last number of years, with attendances increasing from 1,939 in 2009 to 2,767 in 2015 (43% increase). This is projected to rise further to almost 3,000 cases.

Paediatric outpatient attendances, at the Ulster Hospital have increased, in particular from 292 in 2009 to 500 in 2015 (71% increase). At least 75% of these will require surgery using general anaesthetic. Therefore, the need for general anaesthetic theatre resource, on the Ulster Hospital site has increased significantly. The trust informed us that this is due to several reasons including difficulty in gaining access to emergency theatre time in the Royal Belfast Hospital for Sick Children, a reduction in willingness by emergency departments and peripheral hospitals to treat children with lacerations and an increase in both patient and parents expectations.

The numbers attending the minor paediatric trauma service have increased within the South Eastern Trust and this increase has occurred over many years. This is because the surgical registrar on call is based in South Eastern Trust and due to emergency theatre capacity, impact on elective capacity, caseload and travel issues there was a mutual agreement between Royal Belfast Hospital for Sick Children and South Eastern Trust that minor trauma would be best managed through South Eastern Trust to enhance the patient care and experience.

One out of hours emergency theatre list has been retained within the Royal Belfast Hospital for Sick Children and as this covers all specialities, minor trauma is competing with life threatening conditions, resulting in delayed management of

these cases. It is important to note that, due to their complexity, polytrauma[7] cases always remain in Royal Belfast Hospital for Sick Children.

While the elective burns activity sits within Royal Belfast Hospital for Sick Children, there are no dedicated burns theatre lists. Therefore, when a child with burns presents and requires intervention in theatre, other speciality elective activity is stopped. If minor plastics trauma is also totally managed by Royal Belfast Hospital for Sick Children, then the elective activity at the Royal Belfast Hospital for Sick Children would be severely diminished if additional resource is not provided.

While consideration should be given to a single site service it is recommended that children with clefts do and should remain in Royal Belfast Hospital for Sick Children, where the a full multidisciplinary team service is available.

The South Eastern Trust is experiencing an increased complexity of trauma cases and while there is some dedicated specific plastic surgery trauma capacity in theatre, it is often impacted on by other demands

The demand for general anaesthetic sessions in theatre may decrease over time as a result of the increased work being done by the 'see and treat service' and the number of procedures being done under local anaesthetic. However difficulties remain with theatre list cancellations as a consequence of trauma demands e.g. a scheduled local anaesthetic theatre list may need to be cancelled to accommodate an emergency major trauma case.

In addition to this, the South Eastern Trust has implemented elective capping during the winter period. Capping of activity to around 50 cases per week, a manageable amount, has given some flexibility within theatres and plastic surgery surgeons are befitting from this. The trust is however concerned that when the capping ends and the elective capacity increases, plastic surgery trauma activity may then even more difficult to manage.

To try to address the increase in trauma cases, the South Eastern Trust has indicated that the plastic surgery service has recruited a trauma coordinator, which has resulted in bed day savings, with 22% of the attendances now being treated as 'walking wounded' patients and no longer requiring an inpatient bed. However, to appropriately manage the trauma demand, further investment is required to deliver a fully consultant led trauma service.

The review team recommends that the plastic surgery service, when increasing their complement of consultant surgeons, identifies a consultant to lead the trauma service, ensuring that the joint British Orthopaedic Association (BOA)/British Association of Plastic, Reconstructive and Aesthetic Surgeons (BAPRAS) Trauma Guidelines for Orthoplastic Surgery[8] are met in Northern Ireland.

[7] Polytrauma or multiple trauma is a medical term describing the condition of a person who has been subjected to multiple traumatic injuries, such as a serious head injury in addition to a serious burn

[8] http://www.bapras.org.uk/docs/default-source/commissioning-and-policy/standards-for-lower-limb.pdf?sfvrsn=0

The plastic surgery service should also review and address the reasons for the shift in movement of paediatric trauma cases to the South Eastern Trust and transfer this work back to the Royal Belfast Hospital for Sick Children. The current cross-site working arrangements mean that on a practical level, the clinicians trying to deliver the out of hours cover to the South Eastern Trust have physical difficulty providing cover to the Royal Belfast Hospital for Sick Children. In addition to this when they do attend the Royal Belfast Hospital for Sick Children they are seen as a visiting specialty and not as core to the service. These reasons may have been contributory to the drift in activity to the Ulster Hospital site. This is one aspect of the service that is particularly detrimental to training.

Breast Reconstruction: Only two consultants provide this service (one of these consultants also covers burns and is operating at a hospital where microsurgical cases cannot be carried out); therefore one consultant in the South Eastern Trust is tasked with providing a reconstructive service for the breast unit in this trust and a regional service for the other breast units in the Southern, Western, and Northern Trusts. This includes providing microsurgical reconstruction e.g. deep inferior epigastric perforators (DIEPs) for a population of 1.8 million, which can be projected as 125 microvascular breast reconstructive surgeries per annum. Current demand exceeds the capacity of the service to deliver this volume. The review team was also told that this consultant has to participate in the provision of the general plastic surgery service, including dealing with the increasing load from trauma and skin cancer, which limits capacity to provide breast reconstruction and the provision of cover for leave.

The review team considers that currently women in Northern Ireland are not receiving an acceptable or equitable service. Access to microsurgical breast reconstruction is being limited by the lack of surgeons and therefore on occasions may not be offered to the patient. In addition to this, BRCA gene positive patients are not receiving surgery as quickly as they should and this increases their risk of going on to develop a tumour with associated poorer long term prognosis. There needs to be significant expansion of the capacity of this sub-specialty to work alongside general breast surgeons.

Hand Surgery: A significant proportion of the workload referred to the plastic surgery unit involves elective and emergency hand conditions. Failure to provide the appropriate and timely management of these conditions can lead to significant functional issues and may affect resultant outcomes. This in turn can affect the individual's ability to work and perform activities of daily living. There has been a significant increase in the number of hand conditions referred to the plastic surgery service unit over recent years, many of which require complex operative intervention. The plastic surgery unit in the Ulster Hospital receives all hand injuries in Northern Ireland requiring soft tissue reconstruction, nerve, tendon or vessel repair and complex fracture fixation.

A report published by the British Society for Surgery of the Hand[9] recognises the need for optimal quality of care for the increasing number of people suffering from hand injuries and conditions.

[9] Hand Surgery in the UK. A report of a working party. British Society for Surgery of the Hand. London 2007

Key points/recommendations include:

- A minimum of five dedicated full-time hand surgeons per 500,000 population. This equates to 18 for a population of 1.8 million. The service currently has three hand surgeons who have limited regular exposure to elective hand surgery due to issues previously mentioned in relation to trauma and skin cancer.
- Hand injuries should be treated in a timely manner, often requiring immediate surgery or surgery within several hours. The service is unable to meet these guidelines, with patients often being delayed for days.
- A maximum interval of 18 weeks from referral to treatment for elective hand conditions. Many patients are currently waiting well beyond 52+ weeks for treatment. This can result in significant irreversible functional disability.
- The establishment of more hand surgery consultants to ensure adequate quality of training.
- Caution with transfer to the independent sector as this deprives trainees of training opportunities. NHS indemnity does not cover trainees when operating in such units. Trainees, as a result, are unable to achieve minimum numbers to allow for CCT (certificate of completion of training).

Peer Reviews: The NHS England Specialised Commissioning Quality Surveillance Team was commissioned by the Northern Ireland Cancer Network (NICaN), to undertake peer review visits in 2015, to trusts in Northern Ireland providing services for brain and central nervous system, head and neck, hepatobiliary (HPB), skin and urological cancers.

Training in the peer review process was provided to trust managers, including the function and use of the web based Cancer Quality Improvement Network System (CQuINS). Each team to be reviewed undertook a self-assessment against the measures and wrote a self-assessment report that was subsequently made available to the review teams.

Peer reviewers were recruited and trained to undertake reviews. Review teams normally consisted of a consultant (surgeon, oncologist etc.) and a nurse from the same clinical specialty that was being reviewed, a manger of cancer services and a patient representative. At each visit, the reviewers examined the evidence provided by the team delivering the service and had the opportunity to meet with members of that team. The reviewers then agreed a final peer review compliance, identified good practice and any immediate risks (i.e. where there was a significant risk that patients will come to harm) or serious concerns (i.e. issues that could seriously affect the quality or outcomes of patient care or affect staff safety), and wrote a report of their findings.

- **Sarcoma:** The peer review identified both immediate and serious concerns in relation to this tumour site including delay from red flag pathways, variation in the operational process/under-resourced multidisciplinary teams.
- **Cancer (complex skin and head and neck):** In response to the peer review recommendations, the commissioner established two task and finish groups. The review team was informed that the reports from each group were completed on October 2016.

- **Skin:** The immediate and serious concern include: a diluted experience due to multiple surgeons not meeting the minimum number of dissections required; delay in the red flag and routine pathways; and issues relating to multidisciplinary team resource.
- **Head and Neck:** Concerns were raised that surgery is currently undertaken in four of the five trusts in Northern Ireland.

The review team was concerned that three plastic surgeons undertook surgery for sarcoma when the incidence is low. Given that input into a multidisciplinary team is required and the number of other pressures in the service, the review team recommends that this is reviewed and that a single lead sarcoma surgeon is identified, with a second colleague identified to provide cover and joint decision making.

The review team also recommends that a lead plastic surgeon for skin cancer be identified and that the number of surgeons undertaking lymphadenectomy be reduced to meet the activity standard. This does not preclude others from doing skin cancer resections of primary lesions.

Recommendation 5	**Priority: 2**
The current configuration for sub specialism in plastic surgery should be reviewed, by the Regional Plastic Surgery Programme Board and trusts delivering the plastic surgery service (the Belfast and South Eastern Trusts), with consideration given to the feasibility of: • identifying a lead sarcoma surgeon, with a second colleague to provide cover and joint decision making • identification of a lead plastic surgeon for skin cancer • reducing the number of surgeons undertaking lymph node dissection for patients with skin cancer to meet the activity standard. • identification of a lead burns surgeon • identification of a lead trauma and hand surgeon	

The plastic surgery service is currently working through the actions associated with the above mentioned peer reviews including the establishment of fully funded regional multidisciplinary teams. Trusts will continue to work with the commissioner to progress any remaining outstanding recommendations.

Recommendation 6	**Priority: 1**
The Health and Social Care Board should ensure that the actions set out in the final reports of the task and finish groups, established in response to the peer review recommendations in 2015, should be progressed as soon as possible in order to meet the expected standards and in view of the potential for adverse outcomes for patients.	

Cleft: There is currently only one cleft surgeon in Northern Ireland. According to audit outcomes, the delivery of this service is perceived to be very good up until the age of 16 and the service is considered to be a high performer nationally. However when the patient reaches the age of 16 the service to the patient reduces as plastic surgeons are required to deal with the more urgent cancer and trauma cases, meaning that routine elective activity for patients over the age of 16 is reduced. The attending consultant also contributes to the consultant of the week rota. However, when providing 'consultant of the week' service the consultant continues to deliver their other elective commitments in order to ensure the cleft service is not adversely affected. This means that their input as consultant of the week including supervision of junior staff is sub-optimal as it is spread across a number of services/roles. The South Eastern Trust has identified a requirement for further investment in the cleft service to ensure it is sustainable in the future. This should be undertaken in consultation with the UK cleft network to ensure that there is sufficient activity to sustain two consultant surgeons in Northern Ireland. The implications of a non-plastic surgeon being appointed to a future cleft surgery service should also be understood.

Orthoplastic Surgery Service: Standards for management of open fractures of the lower limb[10] were produced jointly by British Association of Plastic, Reconstructive and Aesthetic Surgeons (BAPRAS) and the British Orthopaedic Association in 2009. The principal recommendations regarding specialist centres are as follows:

- A multidisciplinary team, including orthopaedic and plastic surgeons with appropriate experience, is required for the treatment of complex open fractures.
- Hospitals which lack a team with requisite expertise to treat complex open fractures have arrangements for immediate referral to the nearest specialist centre.
- The primary surgical treatment (wound debridement/excision and skeletal stabilisation) of these complex injuries takes place at the specialist centre whenever possible.
- Specialist centres for the management of severe open fractures are organised on a regional basis as part of a regional trauma system. Usually these centres also provide the regional service for major trauma.

The review team considers that currently the service in Northern Ireland is not meeting these standards in terms of joint working between the plastic surgery and orthopaedic services, timely shared decision-making and reconstruction. It is understood that the standards are being reviewed and may make even greater demands for joint and rapid care for higher energy injuries.

The review team was told that the Belfast Trust is currently considering the development of an orthoplastic surgery service to support the orthopaedics service and to ensure the trust meets the joint British Orthopaedic Association (BOA)/ British Association of Plastic, Reconstructive and Aesthetic Surgeons (BAPRAS) Trauma guidelines. The review team agreed that currently there is insufficient

[10] http://www.bapras.org.uk/docs/default-source/commissioning-and-policy/standards-for-lower-limb.pdf?sfvrsn=0

plastic surgery resource to adequately support the orthopaedic service and that communication between the two services is not functioning as it should and welcomed this potential service development. In the short term there needs to be immediate access, on the Royal Victoria Hospital site, to a person who can assess open fracture wounds for plastic surgery input and arrange for patients to be transferred to the care of a plastic surgeon if required.

Recommendation 7	**Priority: 2**
a) The Regional Plastic Surgery Programme Board and the trusts delivering the plastic surgery service (Belfast and South Eastern Trusts) should develop and implement a plan to ensure that the joint British Orthopaedic Association (BOA)/British Association of Plastic, Reconstructive and Aesthetic Surgeons (BAPRAS) trauma guidelines for the management of open fractures (orthoplastic surgery) are met in Northern Ireland. b) The Regional Plastic Surgery Programme Board and the trusts delivering the plastic surgery service (Belfast and South Eastern Trusts) should give urgent consideration of how combined senior assessment (e.g. a senior orthopaedic surgeon and a senior plastic surgeon working together) can be provided in the major trauma centre for all patients with open fractures.	

The Regional Burns Service: The regional burns unit is currently situated at the Royal Victoria Hospital, which is the regional trauma centre for Northern Ireland. The profile of patients presenting with burns injuries has altered over the years. Previously the majority of patients have been injured due to house fires and/or accidents or were victims of 'the troubles'. More recently many patients are presenting with a burn injury due to self-harm, including fire and acid burns. While the majority of the activity in the burns unit may not now be as severe as previously, patients often require a lot of follow up care.

The service has a multidisciplinary burns team and the consultants involved are also members of the skin multidisciplinary team. The resources into the service have not increased to support either the increasingly complex demand for aftercare or the change in patient profile. The Belfast Trust advised the review team that to meet demand the service would require additional funding to increase its allied health professional staffing complement, nursing team (including ward, theatre, pre-assessment and specialist nursing) and also its surgical and the anaesthetic team.

In the Belfast Trust the current theatre available within Royal Victoria Hospital is a burns theatre; the layout of the theatre accommodation however is not conducive to maximising theatre productivity for burns or plastic surgery patients, as there is no separate anaesthetic room or recovery room. This severely limits the number of cases that can be dealt with and this is particularly apparent when the service is aiming to carry out a high volume of short cases that are being treated as daycases.

The burns unit does suffer generally from a lack of space and it would be essential for the rehabilitation team to have a dedicated space for their wide range of therapy modalities including scar management, pressure garment therapy

measurement/ and fitting, splintage, and mobility rehab, in line the recent self-assessment undertaken by the Belfast Trust against the burns care standards. The review team was told that facilities for allied health professionals were limited. There are two physiotherapists and two occupational therapists providing rehabilitation services for both adults and children. Burn therapists provide both in-patient and out-patient treatments in one multipurpose room and cannot use separate physiotherapy/occupational therapy departments due to infection control issues, particularly relating to in-patient burns rehabilitation. Providing treatment and therapy is not appropriate in a generic rehabilitation setting especially in early stages for burns rehabilitation, and would not be in line with the recent self-assessment undertaken by the Belfast Trust against the burns care standards.

The camouflage service is provided by an occupational therapist shared with a physiotherapist. This is located in accommodation which does not have any natural light source, which is essential for colour matching. Also during discussions about available therapy facilities it was mentioned that there is no dedicated area for the sole delivery of rehabilitation therapy. This situation highlights the need for dedicated rehabilitation therapy accommodation within the burns unit itself.

Historically, it was planned to relocate the burns unit to the critical care building in the Royal Victoria Hospital. However, there are now plans in place for both new children's and maternity hospitals to be built at the Royal Victoria Hospital site. The current critical care unit is therefore required as a decant facility while the new maternity hospital is being built. In the future, any inpatient requirement for the maternity hospital is to remain in the critical care unit. This has impacted on the plan to relocate the burns unit to the current critical care unit. There is an interim plan to relocate the burns service to the main theatre floor and to use beds within the existing high dependency unit in the Royal Victoria Hospital. This will require some redevelopment to make the planned location for the burns unit suitable.

In the Royal Belfast Hospital for Sick Children, there is no dedicated paediatric burns theatre list. When a paediatric burn case requires surgery, a general surgical list will be cancelled to allow the child to be treated. All paediatric burns are managed in the Paediatric Intensive Care Unit until they can be transferred to the burns ward. This is currently co-located within a specialist surgery ward and we were told by staff that on occasions it may not be a suitable environment. Children attending the ward for follow up burns dressing have these done in the ward's treatment room, which is not fit for purpose; there is a lack of privacy and the multi-use environment means there is a risk of cross infection.

There are plans for the paediatrics burns service to move into the new children's hospital and the trust has submitted a business case to provide the highest specification for this unit. There will be 10 theatres in the new children's hospital and these will service all paediatric activity including Ear Nose and Throat and Orthopaedics, which is currently undertaken in the Royal Victoria Hospital. This will also provide capacity to increase paediatric plastic surgery activity in relation to trauma, which has been gradually moving to the South Eastern Trust.

As a result of significant pressures on emergency theatre, anaesthesia and critical care resources, within the Belfast Trust, the management of patients with major

burns can be difficult and may be delayed. The issue is exacerbated by the unpredictable incidence and nature of burns injuries and the small number of consultant plastic surgeons on the Royal Victoria Hospital Site. The location of the burns unit in the context of the regional plastic surgery service merits further regional discussion.

The review team identified a need for clear future direction for the burns service in Northern Ireland. In England and Wales burns care is organised using a tiered model of care, which includes the use of a burns centre, unit and/or facility. The most severely injured are cared for in services designated as centres and those requiring less intensive clinical support are cared for in services designated as either burns units or facilities.

Currently the burns service in Northern Ireland has not been categorised in these terms as the National Network for Burn Care National Burn Care Standards[11] are not applicable to Northern Ireland. The trust however has completed a self-assessment against these standards and the results of the self-assessment are presented in the following table provided by the Belfast Trust.

Results of the Belfast Trust self-assessment against the National Network for Burn Care National Burn Care Standards

Section	Standard not met	Standard partially met			Standard fully met	Full or Partial Compliance	N/A*
	0	1	2	3	4		
Patient Centred Care (13 standards)	2	2	1	3	5	84.6%	0
Multidisciplinary team (31)	3		1	7	10	81.8%	9
Inter-reliant Services (13)				1	5	100%	7
Facilities, Resources & environment (13)	4			1	4	60%	4
Policies and Procedures (13)	2	1		1	9	84.6%	0
Clinical Governance (11)	3	2	2	1	2	80%	1
Burn Care Network (19)	Not assessed						
TOTAL	14	5	4	13	35	82.4%	

*Figures include adult services only therefore some standards are not applicable

While Northern Ireland does not have sufficient activity to sustain a burns centre, decisions need to be taken about the need for a burns unit. It was recommended

[11] http://www.britishburnassociation.org/downloads/National_Burn_Care_Standards_2013.pdf

that the burns service uses their self-assessment against National Network for Burn Care National Burn Care Standards to establish what level of service could be delivered in Northern Ireland. It was considered that presently the facilities are inadequate for even a burns unit and it is unlikely that, even with investment, a burns centre would be a sustainable or required option.

It was further recommended by the RQIA review team that, if patients requiring burn centre level care remain in Northern Ireland, the on-call rota must be separate from the plastic surgery on call rota. This is not a requirement for burns unit level care.

Recommendation 8	**Priority 2**
a) The burns service, at the Belfast Trust, should adopt the National Network for Burn Care National Burn Care Standards and self-assess against them. b) The burns service, at the Belfast Trust, should aim to provide 'burn unit' level care. c) The burns service, at the Belfast Trust, should enter into a partnership for care and training with a burns centre elsewhere. d) If burns centre level patients are to remain in Northern Ireland, the burns service at the Belfast Trust must operate the on-call burns service rota separately from the plastic surgery on call rota.	

3.4 Training Opportunities for Junior Medical Staff

Recent trainee surveys and reports have highlighted areas of concern in relation to junior staff training for plastic surgery trainees. These include the General Medical Council (GMC) national training survey, deanery reports, information from annual review of trainees (with college/Specialist Advisory Committee representative present) and internal trainee surveys/interviews.

Common issues continue to be identified including lack of clinical supervision, inadequate experience in relation to certain treatments and access to educational resources. Plastic surgery trainees specifically report insufficient supervision when dealing with trauma cases and at ward/outpatient level and in theatre which is being exacerbated by the 'consultant of the week' system, which is contributing to lack of direct consultant input. Adequate experience is not being provided with respect to case-mix and numbers of operative procedures. The excessive amount of trauma and skin malignancy is displacing conditions such as elective hand surgery. As a result, trainees are struggling to achieve the mandatory minimum numbers to allow completion of their training specifically for elective hand surgery, free tissue transfer/microsurgery, aesthetic surgery and breast reconstruction. Trainees have also highlighted insufficient training and teaching opportunities in outpatient clinics and theatre due to excessive workloads and the difficulties of covering two major hospitals out of hours and of securing theatre time at the Royal Victoria Hospital.

There are real concerns that, in the current service structure, trainees will not be able to achieve sufficient experience to allow them to be awarded their certificate of completion of training (CCT). Currently, Northern Ireland has the lowest pass

rate in the UK for trainees sitting the plastic surgery exit exam (FRCS Plastic Surgery).

While the South Eastern Trust has been able to address some of the areas of concern highlighted in the recent reports, some remain outstanding due to limited resourcing. These include the development of a consultant led trauma service and ensuring access to relevant elective and microsurgical training opportunities, to allow for a high-quality training programme. Additional consultant posts would provide opportunities for senior trainees to remain in Northern Ireland and make training in Northern Ireland more attractive to new entrants

The Joint Committee on Surgical Training (JCST) quality indicator for work based assessment (WBAs) stipulates that all surgical trainees at both specialty and core level should have the opportunity to complete a minimum of 40 WBAs per year, which equates to approximately one WBA per working week. As previously highlighted, by the Specialist Advisory Committee in the Joint Committee on Surgical Training annual review of trainees, the vast majority of training posts allow trainees the opportunity to complete a minimum of 40 WBAs per year. However, the number of trainee responders across the United Kingdom, who indicated that they completed at least one WBA per working week in their training placement in plastic surgery has fallen from 99% in 2013/14 to 92% in 2014/5[12]. This report recommended that the responses from plastic surgery specialty trainees should be monitored to ensure that responses do not continue to fall.

The review team was concerned that the situation at present in the Northern Ireland service could lead to the withdrawal of training places by the Specialist Advisory Committee. This could have potentially far reaching implications for the plastic surgery service in Northern Ireland which is already under pressure in terms of manpower and depends on service provision by the trainees. The review team further indicated that there is a need to establish a partnership arrangement with another centre for training to ensure trainees have adequate exposure to the more elective procedures, which they are not routinely undertaking within Northern Ireland.

The review team considers that the trusts, supported by the commissioner, need to explore the available options and the logistical details of such an arrangement, ensuring that centres are identified that are currently doing the procedures which are not being done locally. In the longer term, there needs to be an increase in capacity within the service in Northern Ireland to ensure that trainees are provided with adequate exposure to all necessary procedures.

Increasing capacity in the consultant plastic surgery team will take time. In the interim, a number of other avenues have to be explored to maintain training places in Northern Ireland. The review team considers that the Health and Social Care Board should consider the provision and funding of a number of fellowship opportunities (in other hospitals in Great Britain) to support the trainees to fulfil their training requirements. This would be a desirable proposition for the host centre as it would offer them an additional resource.

[12] http://www.jcst.org/quality-assurance/documents/jcst-trainee-survey/AnnualReportoftheJCSTtraineesurveyfor2016FINAL.pdf

As previously stated there are opportunities for trainees to gain experience of elective procedures in the independent sector. However, these opportunities are being limited due to difficulties with indemnity cover. The review team considers that if this option will provide meaningful experience for trainees, the extra cost should be met in the short term.

In addition to the proposals set out above, the South Eastern Trust and the Belfast Trusts could jointly consider the establishment of a paediatric plastic surgery fellowship in the Royal Belfast Hospital for Sick Children, which would provide an excellent training programme with a wide range of training opportunities. This could be open to trainees from Northern Ireland on an alternating basis to attract senior trainees to Northern Ireland.

The review team considers this to be an issue that needs to be addressed as a priority to maintain the status of trainees within the plastic surgery service in Northern Ireland.

Recommendation 9	**Priority 1**
In the short term, the Health and Social Care Board/Public Health Agency must work together with the Northern Ireland Medical and Dental Training Agency (NIMDTA) and Health and Social Care trusts to provide further opportunities for doctors in training in plastic surgery within Northern Ireland. The following areas should be considered: • establishing a partnership arrangement with another centre for training to ensure trainees have adequate exposure to all necessary procedures • provision and/or facilitation of fellowships in other UK centres • creating a paediatric plastic surgery fellowship in Royal Belfast Hospital for Sick Children • resolving the current indemnity issues for trainees in relation to working in the independent sector • increasing consultant's supervision available to trainees.	

3.5 Theatre Capacity

Across the entire service, theatre time required outstrips the currently available theatre capacity. There may also be an opportunity to ensure that current theatre capacity is optimally utilised. Many procedures, due to their nature, are also staged and this additionality is not currently factored into capacity demand analyses. The increasing complexity of surgical procedures is also not currently factored in, as capacity is still counted by numbers of patients/procedures (and not by length or complexity of procedures). There is a need for a review of theatre utilisation and efficiency measures and the distribution between local and general anaesthetic and elective and unscheduled care. The South Eastern Trust has recently commenced a piece of work to develop a procedure based service and budget agreement and there is an urgent requirement to accurately scope the type, severity and priority of patients referred to this service, so that resources can be allocated appropriately.

As stated previously, the current burns theatre in the Belfast Trust does not help to maximise theatre productivity for burns or plastic surgery patients, as there is no separate anaesthetic room or recovery room. This considerably limits the throughput of patients. In addition, it is not fully utilised or staffed, and from data made available to the review team, activity relating to burns patients occupies a high proportion of the funded lists, but a small proportion of the available time. There are also potential infection control risks of sharing a burns theatre with elective activity given the rise of multi-resistant pathogens in burn care.

Trusts also need to improve activity coding, and their access to the Theatre Management System (TMS) to allow them to build a better picture of the actual activity undertaken by the entire plastics service. Currently, plastic surgeons are working in conjunction with other surgical specialities; however, the activity undertaken jointly is being attributed only to the primary surgical speciality (which may not be plastic surgery). Therefore a significant proportion of activity that plastic surgeons are engaged in is not being reflected in their overall output, and so a complete picture of their activity levels is not being presented.

The review team considered that in both the Belfast and South Eastern Trusts there are opportunities to further develop local anaesthetic provisions and ambulatory care opportunities. However, these opportunities were not being fully considered due to lack of capacity and the pressure the system is under to deal with emergency referrals. The plastic surgery team already holds outpatient clinics in other hospitals, although no ambulatory care is provided in these hospitals. The review team considers that the plastic surgery service should explore opportunities for better utilisation of peripheral hospitals, perhaps directing work that can be done under local anaesthetic to these sites, and making access for patients easier.

Recommendation 10	**Priority 2**
a) Trusts delivering the plastic surgery service (Belfast and South Eastern Trusts) should explore opportunities to further develop local anaesthetic provision and ambulatory care models of service delivery in peripheral hospital sites, directing work that can be done under local anaesthetic to these sites. b) Trusts delivering the plastic surgery service (Belfast and South Eastern Trusts) should consider opportunities for nurse-led and hand therapy-led clinics to improve access and capacity across the region.	

Section 4: Quality Improvement Initiatives

Despite the pressure on the service the review team was told that quality improvement is core to the work of the plastic surgery service. However there is no evidence of assuring or benchmarking outcomes on a national basis. There is some good work being done in the sub-speciality for cleft in conjunction with the Cleft Registry and Audit Network (CRANE); however this needs to be replicated within the other sub-specialty areas.

Internally, in the South Eastern Trust, the following audits have been carried out in conjunction with the assistance of the Safe and Effective Care Department:

- 2015 – National Audit on Flexor Tendon Injuries
- 2016 – Should K-wires be buried or not?
- 2016 – Management of Flexor Sheath Infections
- 2016 - The TeaM (Therapeutic Mammaplasty) Study

The South Eastern Trust advised the review team that 10 quality improvement projects had been undertaken by plastic surgery trainees across the two year period 2014-2016. In addition to this, two specific quality improvement projects were undertaken; these are outlined below along with the improvements implemented.

Reducing Length of Stay For Flexor Tendon Injury Patients: Traditionally every patient would have had a 48 hours post-operative hospital stay, including facilitation of physiotherapy appointments. Based on patient feedback and using nurse facilitated discharge with provision of an early appointment to return to the physiotherapist, the average length of stay has reduced from a baseline of 2.41 bed days (2011-12) to 1.3 bed days (2014-15). This process has been adopted for other patient groups such as nerve injury patients, and is now integrated into common practice.

Provision of a Weekly Plastic Surgery Dressing/Review Clinic on Craig (Paediatric Ward): This service is led by a registered children's nurse, with experience in plastic surgery. This quality improvement programme introduced a nurse led, weekly paediatric plastic surgery dressing/review clinic on Craig ward which all children attend.

In the Belfast Trust, the clinical team carries out quality improvement work, and supports junior staff and student learning through audit. A specific consultant surgeon, now formally accredited in quality improvement, has:

- mentored medical trainees through the Specialist Trainees Engaged in Leadership Programme (STEP). This programme addresses the shortfall in leadership training for senior trainees and is open to applications from all senior trainees based in the Belfast Trust with sponsorship of a consultant.
- created a burn injury database, to collate data for peer review and benchmarking of outcome measures, used as both a self-assessment and also against other units in the UK.

- undertaken an outcomes measurement audit and presented information in relation to data collected and that not collected. A new proforma was developed to collect data, and this will be used until the new burn Injury database is operational.

A special study module is delivered twice a year for Queens University Belfast medical students. Students undertake a quality improvement project as part of their assessment. Four projects in relation to burns have been presented to the Faculty of Medical Leadership and Management and at the Regional Medical Leadership and Quality Improvement in Northern Ireland conference.

- Assessment of total body surface area percentage (TBSA%) of burns presenting to emergency departments in Northern Ireland
- Developing and assessing the effectiveness of a biobrane information leaflet for the parents of paediatric burns patients – a quality improvement study
- Development of a tissue expansion patient information leaflet
- Evaluating total body surface percentage in burns patients – are we doing it right?
- Identifying potential distractions during surgery – minimising the risk of avoidable error

5. Conclusions

5.1 Conclusions

The review team considered that the plastic surgery service contains a large number of dedicated individuals from all parts of the multidisciplinary team who are working extremely hard to provide the best possible service for patients. Clinicians and other team members have a high degree of professionalism and a desire to drive improvement. However, the systems and structures in place at the moment and the capacity of the service to deliver are hindering innovation and progress, and there are concerns about morale and resilience in the clinical team.

The review team found that in Northern Ireland, there does not appear to be a clear commissioning direction for the plastic surgery and burns services. Currently the responsibility for the commissioning of plastic surgery and burns services is split across a number of different commissioning teams, which can have differing priorities. There is a need for clarity regarding where the overall responsibility for commissioning of the service lies. It was also clear to the review team that the immediacy of some of the issues reported by clinicians, which could directly impact on patient safety, was not being reflected in any commissioning strategy.

Work has been undertaken, by trusts and the commissioner to revise the 2006 regional policy A Policy to Make Best Use of Resources in Plastic Surgery and Related Specialties (EUR), 23 November 2006. This included a regional workshop held in 2012. However, at the time of this review the revised EUR policy had not yet been finalised. Subsequently the review team has been advised that its publication is now expected to be in spring 2017.

The review team considered that although important, the revised EUR policy would not address the major issues for the plastic surgery service in terms of workload, capacity and issues for plastic surgery doctors in training. There were a number of long term issues for the service, but also a number of shorter term solutions that could be progressed immediately, to allow the service to perform more effectively.

Task and finish groups relating to cancer, established in response to the peer review recommendations in 2015, completed their specific pieces of work in October 2016. The review team recommends that the actions set out in the final peer review reports should be taken forward as soon as possible.

In 2006 the South Eastern Trust was identified as the trust with the overall responsibility for the plastic surgery service in Northern Ireland. The aim for the service to function as a single service on multiple sites, however, the review team considered that this is not happening, as the service is managed by two distinct trusts with separate funding streams and governance arrangements.

The review team consider that in the short-term a partnership board/working group should be established to integrate the service into a single managerial, planning and funding model. Staff training and development could be undertaken on a cross site basis in order to provide resilience for the service.

A move to a single major inpatient site in the medium-term would potentially benefit all members of the multidisciplinary team, by helping them work together as a cohesive unit and by providing resilience for areas of the service that are currently being provided by a single person. It would also lead to improved training, increased value and efficiency and help to improve communication between management and clinical staff.

It is not within the remit of this review to recommend where a single service should be situated; however, any working group has to take into account the future direction of burns treatment provision in Northern Ireland, and also the fact that paediatric burns treatment will continue to be provided at the Royal Belfast Hospital for Sick Children.

Demand for the plastic surgery service in relation to cases involving trauma and skin cancer is increasing yearly. This is having a negative impact on the ability of the service to meet its elective targets. This is exacerbated by a general increase in emergency medical and surgical admissions and further impacted by winter peaks and the capping of elective admissions. A number of short term suggestions have been recommended within this report.

The review team were concerned that the service is not meeting its targets in terms of red flag referrals, nor is it complying with joint orthopaedic/plastic surgery best practice standards. Access to microsurgical breast reconstruction is being limited by the lack of surgeons, and therefore women in Northern Ireland are potentially being disadvantaged, despite the efforts of the plastic surgery service, with the potential for adverse outcomes.

The review team considers that extra capacity in terms of numbers of plastic surgery consultants is required urgently. However, this has to be considered in terms of what this extra capacity can deliver. It will have to:

- help to reduce the burden of trauma and cancer cases
- provide additional supervision/training for doctors in training
- deal with the issues in relation to sub specialities
- provide an effective orthoplastic surgery service that complies with the joint British Orthopaedic Association (BOA)/British Association of Plastic, Reconstructive and Aesthetic Surgeons (BAPRAS) trauma guidelines.

The review team considered that a particular area of concern is the challenges being experienced by plastic surgery doctors in training. As a result of increases in trauma and cancer and the lack of capacity within the service to both deal with this and maintain an adequate teaching /supervision presence, training places in Northern Ireland could be under threat. The review team considered that this could have far reaching consequences for the service, as it may be difficult to attract candidates from outside Northern Ireland.

The review team considers that for a number of years the plastic surgery service has been left to “get on with it”, and although not able to confirm this fact, there was a view that the plastic surgery service was still being considered as somehow a cosmetic service, and the breadth of its work was being underestimated.

Following the publication of the Policy to Make Best Use of Resources in Plastic Surgery and Related Specialties (EUR), 23 November 2006, funding to increase the complement of consultant plastic surgeons was provided. However, no further consultant capacity has been provided since then, even though there is clear evidence to demonstrate that demand is increasing, including the service's inability to meet targets in relation to red flag referrals and lengthening elective waiting lists.

Although welcome, short term investment such as provision of waiting list initiatives will not be sufficient to meet the future demands on the plastic surgery service in Northern Ireland, and is not conducive to a sustainable solution.

The review team considers that the plastic surgery service needs to be reassessed in the short term to meet increasing demand and also to protect its status as a training service. It also needs careful long term planning to develop a true single service on a single inpatient site and also to add capacity that will provide the best possible outcomes. The development and support of strong clinical leadership alongside clear managerial direction will be important to take the service forward, with sub-specialty leads ensuring the standards of care and training are across the relevant service areas.

5.2 Summary of Recommendations

The recommendations have been prioritised in relation to the timescales in which they should be implemented, following the publication of the report.

Priority 1 - completed within 6 months of publication of report
Priority 2 - completed within 12 months of publication of report
Priority 3 - completed within 18 months of publication of report

RQIA Recommendation 1: RQIA recommends that **Priority 2**

a) The Health and Social Care Board should complete the revision of the EUR policy and ensure it provides clarity in relation to the areas mentioned in the body of this report.
b) The Health and Social Care Board should also ensure that the EUR policy is being adhered to by all relevant surgical specialities within trusts and is communicated widely to GPs, provider Health and Social Care trusts and the public.

RQIA Recommendation 2: RQIA recommends that **Priority 2**

a) The Regional Plastic Surgery Programme Board should progress the implementation of a single service model, managed by one trust, for burns and plastic surgery in Northern Ireland.
b) In the medium term consideration should be given to locating the service on a single site. The working group should decide on the most appropriate site.

RQIA Recommendation 3: RQIA recommends that **Priority 2**

The Department of Health should identify recurrent funding to employ two additional plastic surgery consultants for the plastic surgery service in Northern Ireland immediately followed by a full evaluation of the wider resources[13] required for the future.

RQIA Recommendation 4: RQIA recommends that **Priority 1**

a) Trusts delivering the plastic surgery service (the Belfast and South Eastern Trusts) should consider different ways, including using technology, of providing better access to and better pathways through the service for patients with suspected skin cancer.
b) The South Eastern Trust should identify a skin cancer sub-specialty lead to progress this and models elsewhere in the United Kingdom should be reviewed.

[13] The wider resource requirements may include: additional anaesthetic and theatre sessions, nursing and clerical support. Additional beds and additional allied health professionals to support the subspecialisation or advanced practitioners may be required depending on the service model.

RQIA Recommendation 5: RQIA recommends that **Priority 2**

The current configuration for sub specialism in plastic surgery should be reviewed, by the Regional Plastic Surgery Programme Board and trusts delivering the plastic surgery service (the Belfast and South Eastern Trusts), with consideration given to the feasibility of:

- identifying a lead sarcoma surgeon, with a second colleague to provide cover and joint decision making
- identification of a lead plastic surgeon for skin cancer
- reducing the number of surgeons undertaking lymph node dissection for patients with skin cancer to meet the activity standard.
- identification of a lead burns surgeon
- identification of a lead trauma and hand surgeon

RQIA Recommendation 6: RQIA recommends that **Priority 1**

The Health and Social Care Board should ensure that the actions set out in the final reports of the task and finish groups, established in response to the peer review recommendations in 2015, should be progressed as soon as possible in order to meet the expected standards and in view of the potential for adverse outcomes for patients.

RQIA Recommendation 7: RQIA recommends that **Priority 2**

a) The Regional Plastic Surgery Programme Board and the trusts delivering the plastic surgery service (Belfast and South Eastern Trusts) should develop and implement a plan to ensure that the joint British Orthopaedic Association (BOA)/British Association of Plastic, Reconstructive and Aesthetic Surgeons (BAPRAS) trauma guidelines for the management of open fractures (orthoplastic surgery) are met in Northern Ireland.
b) The Regional Plastic Surgery Programme Board and the trusts delivering the plastic surgery service (Belfast and South Eastern Trusts) should give urgent consideration of how combined senior assessment (e.g. a senior orthopaedic surgeon and a senior plastic surgeon working together) can be provided in the major trauma centre for all patients with open fractures.

RQIA Recommendation 8: RQIA recommends that **Priority 2**

a) The burns service, at the Belfast Trust, should adopt the National Network for Burn Care National Burn Care Standards and self-assess against them.
b) The burns service, at the Belfast Trust, should aim to provide ‘burn unit’ level care.
c) The burns service, at the Belfast Trust, should enter into a partnership for care and training with a burns centre elsewhere.
d) If burns centre level patients are to remain in Northern Ireland, the burns service at the Belfast Trust must operate the on-call burns service rota separately from the plastic surgery on call rota.

RQIA Recommendation 9: RQIA recommends that **Priority 1**

In the short term, the Health and Social Care Board/Public Health Agency must work together with the Northern Ireland Medical and Dental Training Agency (NIMDTA) and Health and Social Care trusts to provide further opportunities for doctors in training in plastic surgery within Northern Ireland. The following areas should be considered:

- establishing a partnership arrangement with another centre for training to ensure trainees have adequate exposure to all necessary procedures
- provision and/or facilitation of fellowships in other UK centres
- creating a paediatric plastic surgery fellowship in Royal Belfast Hospital for Sick Children
- resolving the current indemnity issues for trainees in relation to working in the independent sector
- increasing consultant's supervision available to trainees.

RQIA Recommendation 10: RQIA recommends that **Priority 2**

a) Trusts delivering the plastic surgery service (Belfast and South Eastern Trusts) should explore opportunities to further develop local anaesthetic provision and ambulatory care models of service delivery in peripheral hospital sites, directing work that can be done under local anaesthetic to these sites.
b) Trusts delivering the plastic surgery service (Belfast and South Eastern Trusts) should consider opportunities for nurse-led and hand therapy-led clinics to improve access and capacity across the region.

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