### Background/Context

Given the focus on waiting times and recent implementation of the Treatment Time Guarantee, greater pressure is felt by all NHS Boards across Scotland to ensure that theatre management processes are sufficiently robust to deliver against these targets. For NHS National Waiting Times Centre Board (NWTCB), in particular due to its role in providing support to the territorial NHS Boards, and the reliance it places on those NHS Boards in the theatre planning process, theatre management continues to be a challenging area.

### Problem

The Theatre Allocation Rota (TAR) is a key component of the theatre booking and scheduling system. A calculation is made of the number of sessions required to accommodate the annual requirements for a specific service e.g. Eye surgery require 3500 cases per year, 7 cases per session = 10 sessions per week over 50 weeks. A number of key problem areas have been identified:

1. **Mismatch Between Visiting Surgeon Availability and Physical Theatre Capacity**

The current allocation of theatre sessions to general, plastics, ophthalmics and scopes is determined by visiting surgeon availability. In some instances, surgeons only have weekend availability or at times when there are significant demands on theatre capacity.
2. **Theatre Slots are Allocated to Some Specialties 4-6 Weeks Prior to Date of Surgery**

All sessions that are not serviced by in-house surgeons are then added to the TAR according to the surgeons’ availability. However, the surgeon availability is requested 6-8 weeks prior to the surgery date. Only when surgeons have confirmed availability does the TAR become finalised and surgery dates available to offer out. This current system dictates that the whole referral, booking and scheduling process is required to happen within a period of two weeks – during which time patients need to be given a pre-assessment appointment.

3. **Numerous Differences in the Booking and Scheduling Processes According to Speciality and Referring Board**

There are a number of variations in the theatres planning, scheduling and patient booking processes between the surgical specialties. Processes in the specialties have evolved separately over time. For example, one NHS Board refers plastic surgery patients via email, whilst orthopaedic patients from the same NHS Board are referred using SCI gateway.

4. **Management of Cancelled Operating Sessions**

Due to the short time frame of obtaining referrals from territorial boards, booking patients to attend pre-assessment and scheduling for surgery (all within two weeks), some patients either Do Not Attend, are unfit for surgery or do not require the procedure and are therefore cancelled. It is then extremely difficult to fill these vacant theatre slots at such short notice. Cancelled sessions due to surgeon leave or unavailability are counted towards underutilisation if sessions are not closed within six weeks of the day of surgery – and this is currently commonplace.

5. **Understanding of the Functionality and Use of Opera**
## Theatre System
There is a misalignment between the functionality of Opera and the theatre planning processes currently in place. As a result, the functionality in Opera is not able to be fully utilised to contribute towards increased efficiency and a streamlined process.

## Aim
The Theatre Allocation Rota will be available and populated with the correct number of sessions allocated to each speciality to accommodate the patient numbers advised by forecast planning. The operating sessions will be covered by appropriate surgeons and theatre staff, who will treat an optimum number of patients during each session.

## Action taken
**Theatre Allocation Rota**
- A standardised and functional TAR template has been developed around the physical capacity within theatres.
- Session times for all specialities have now been defined.
- The target number of procedures per session have been calculated using actual data and have been agreed with surgeons.
- A formula has been developed to calculate the number of sessions required per year, per speciality. This will be reviewed at three-monthly intervals to review progress.

**Mismatch Between Visiting Surgeon Availability and Physical Theatre Capacity**
- Senior managers have worked with counterparts in another NHS Board to negotiate that the job plans for some of their plastic surgeons now incorporate operating time at NWTCB.
- The number of plastic surgeons available has been increased through negotiation with a consortium of plastic surgeons from NHS Greater Glasgow and Clyde who will provide agreed cover for NWTCB plastic surgery sessions.
- Clinical Leads for both general surgery and endoscopy have been tasked with recruiting more colleagues to join
NWTCB doctors’ bank, taking account of the gaps in availability of existing surgeons.

- The TAR is now in the process of being rolled out, with requests for surgeons’ availability made for the whole year. This will give an indication well in advance, and allow for contingencies to be made when visiting surgeons are on leave

**Differences in the Booking and Scheduling Processes According to Speciality and Referring Board**

- An optimum standard process for referral and scheduling of patients for surgery has been developed in collaboration with other NHS Boards.
- All patients will now be referred electronically via SCI Gateway to ensure they can be scheduled within the allocated stage of treatment times. The process has been compiled into a flowchart with clear timescales and distributed to necessary areas. These processes have also been formalised as Standard Operating Procedures via Clinical Governance

**Management of Cancelled Patients and Operating Sessions**

- Cancellation reasons for the previous 12 months have been reviewed and examined
- When a patient or theatre list is cancelled, an alternative date will be available
- Operating sessions with no patients allocated will be closed at six weeks prior to surgery date (with the facility to re-open if necessary)
- Patients requiring pre-assessment will be booked to attend two weeks prior to date of surgery in order to identify and rectify any potential cancellations
- All patients will be contacted 48 hours prior to procedure to confirm attendance and fitness for surgery
NB – between April 2013 and April 2014, there has been a considerable increase in the volume of patients attending ophthalmology pre-op assessment clinics.

**Understanding of the Functionality and Use of Opera Theatre System**

- OPCS codes used to refer patients on Helix PMS system have now been aligned to the OPCS codes in Opera. This now reduces the need for booking office staff to transcribe information from patient notes on the Opera, which in turn reduces the risk of the wrong procedure being scheduled.

- A flowchart diagram describing the correct process to utilise predictive scheduling on Opera has been devised.

- Copies of the flowchart and up-to-date OPCS codes and procedure descriptions have been distributed to all Booking Office Co-ordinators.

- One-to-one training has been delivered to all Booking Office Co-ordinators on the use of predictive scheduling.
### Results

A summary of the patient, staff and organisational benefits include:

**Patient**
- Reduced pre-assessment and surgery cancellations
- Better patient experience

**Staff**
- Staff will be utilised to full capacity
- Better planning of off-duty
- Less requirement to change rostered time off

**Organisation**
- Achievement of patient treatment targets
- Better utilisation of staff and theatre facilities
- Better working relations with territorial boards

As this project is at an early stage, and the outcome data is only available after two months, robust quantifiable data will not be available until July 2014 at the earliest. However, the charts below show encouraging improvements during May and June 2014.
Average Number of Procedures per Operating Session - Plastics

Average number of procedures per session = 2.7

Baseline Data
Transition Period
Change Data

Average Number of Procedures per Session - General Surgery

Average number of procedures per session = 2.3

Baseline Data
Transition Period
Change Data

Efficiency savings and productive gains

Further quantifiable data will be available by summer 2014. Productivity savings may also release staff time, through improving work practices or business processes.

- By increasing the number of patients on the operating lists, the number of sessions required to treat the patient...
numbers will be reduced – i.e. less theatre and staff expense
- Same staff, theatre and equipment available but more patients treated per list

**Sustainability**
- Processes are being formatted into Standard Operating Procedures and will be ratified through Clinical Governance and operational routes

**Lessons learned**
- Use of small working group consisting of staff who are in apposition to make decisions and action the changes
- Early clarification of roles using RACI Matrix. A RACI Matrix clarifies roles and responsibilities, making sure that nothing falls through the cracks. RACI charts also eliminate duplicate efforts and confusion by assigning clear ownership for each task or decision
- Intensive meetings (weekly) with email communication and collaboration in between
- Support of Project Lead to follow up on actions and provide support and information to other members of the group
- Use and review of a rolling action plan
- Use and review of outcome and process measures
- Refocusing the group on the immediate issues at the weekly meeting