



NATIONAL
CLINICAL
PROGRAMME
IN SURGERY

PROGRAMME REPORT 2013



Forbairtíocht na Seirbhíse Sláinte
Health Service Executive

Clinical Strategy and Programmes Division



RCSI

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INTRODUCTION

This report is aimed at giving an update on the National Clinical Programme in Surgery (NCPS) in Ireland and in so doing provides an overview of the **public** surgical service. It will:

1. Look at what the NCPS does and has done until December 2013.
2. Outline some of the national successes in surgery;
3. Provide an update of our present understanding of the surgical workload;
4. Look at the Consultant workforce – as a start to overall workforce planning;
5. Continue to address the ‘patient journey’ with particular reference to the theatre journey (The Productive Operating Theatre, TPOT);
6. Outline the plans for next year.

PURPOSE AND OBJECTIVES OF NCPS

What the NCPS does

The NCPS is a partnership between the Royal College of Surgeons in Ireland and the HSE Division of Clinical Strategy and Programmes. Its mission is about improving patient surgical care by promoting better surgical governance and efficiency, recognising the need for securing designated beds for surgery – both elective and acute, more efficiently planning patient flow and performance management set against improvement strategies, KPIs and other metrics (including the Operating Theatre Programme – TPOT), and encouraging fuller clinician engagement with HIPE and target setting.

Stakeholder Involvement

Critical to its mission is engagement with key stakeholders including the HSE Divisions and Special Delivery Unit, the National Cancer Control Programme, HIQA (particularly in relation to Health Technology Assessments), Department of Health, acute hospitals and hospital groups (both their management and all clinical staff delivering surgical care), the surgical sub-specialties, and Patient Advocacy amongst many others. This engagement is exemplified by NCPS participation in established committees and in the preparation of various documents in 2013. (Appendix 1, P. 15) Also during 2013 the NCPS met with the surgical sub-specialties General/ Breast, Paediatrics (General Paediatric Surgery, at present), Trauma and Orthopaedics, General/Vascular, Neurosurgery and Otolaryngology, Head and Neck Surgery (OHNS).

Programme roll out

In 2011, the NCPS (in partnership with the College of Anaesthetists of Ireland) published the Model of Care for Elective Surgery in order to provide guidance for the improvement in the provision of elective surgical services which, by way of summary, set out the principles for Pre-admission Assessment, Day Surgery, Day of Surgery admissions and Discharge planning.

In 2013 the Model of Care for Acute Surgery was published and included an analysis of the surgical workload by HSE region based on completed 2011 HIPE data (the most recent available at time of publishing). It set out the principles necessary for separating the flows of acute from elective patients, good governance, the need for the early participation of senior decision makers and the provision of dedicated beds, theatres and acute surgical assessment units, amongst many other issues.

The NCPS team continued a programme of hospital visits to acute hospitals during 2013 which is detailed in Appendix 2, P.16. Each acute hospital (excluding Maternity and specialist Paediatric hospitals) was provided with its own 2011 HIPE data in Dec 2012 (see Page 5, para 1). The data was reviewed with hospital staff and subsequently assessed with regard to issues such as its compliance with the elective and acute models of care, governance, infrastructure, audit and KPIs and project development. All of this information is maintained in a database in the project office.

The NCPS has started a process of assessing the status of progress of improvement and has issued reports which include a pre discussed RAG score with individual hospitals from October to December 2013. It is intended that this review methodology will be rolled out to all acute hospitals in 2014.

National status reports can be generated from the database; for example, factors such as the hospital status vis á vis peri-operative governance, pre-admission assessment units and acute surgical assessment units can be summarised as of December 2013 (Figure 1):

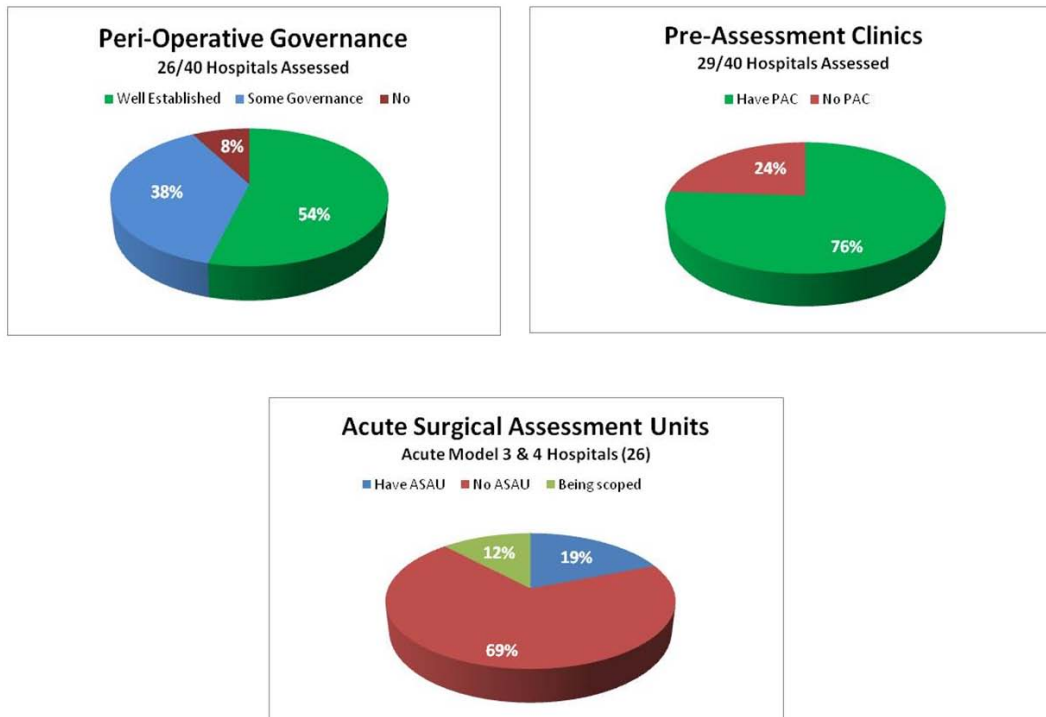


Figure 1: % Acute Hospitals with peri-operative governance, pre-assessment services and Acute Surgical Assessment Units.

These examples suggest that there is still a way to go in terms of full application of Models of Care. Nevertheless, the NCPS has to acknowledge that there has been good engagement with hospitals and the Programme is seen to provide support for clinicians and managers in their plans to continue to improve services and resource utilisation. The role of the NCPS is one of facilitation and guidance while actual implementation remains the role and responsibility of the HSE management and local teams. During Programme visits to hospitals we have seen an impressive array of performance improvements and initiatives despite the difficult financial environment. Together we are getting a better handle on data and its interpretation, which is a fundamental requirement to the better understanding of all concerned. Overall there has been a significant and measurable process improvement in surgical performance over the last 2 years.

Improvements and Benefits of the NCPS roll-out

The validated 2012 HIPE data became available in Q3 2013 which allowed the NCPS to further analyse trends in surgical activity nationally.

When 2012 activity was compared to that of the baseline year of 2010 it was found that surgical volume had increased by 9%; bed day usage went down by 7.2% and average length of stay by 6.1% giving a gross bed day saving of 191,006. (Net bed days saved was 86,246 as total volume of patients increased and much of the additional capacity generated was used

to treat extra patients) which equates to a net saving of €16,300,500 (At a marginal cost of €189.00/bed/day, discounting fixed costs; this likely substantially underestimates true savings that have been achieved). At the same time Day Case rates have increased by 8.7%. (Figure 2) Not alone do these improvements drive down costs but also help to control and curtail waiting lists.

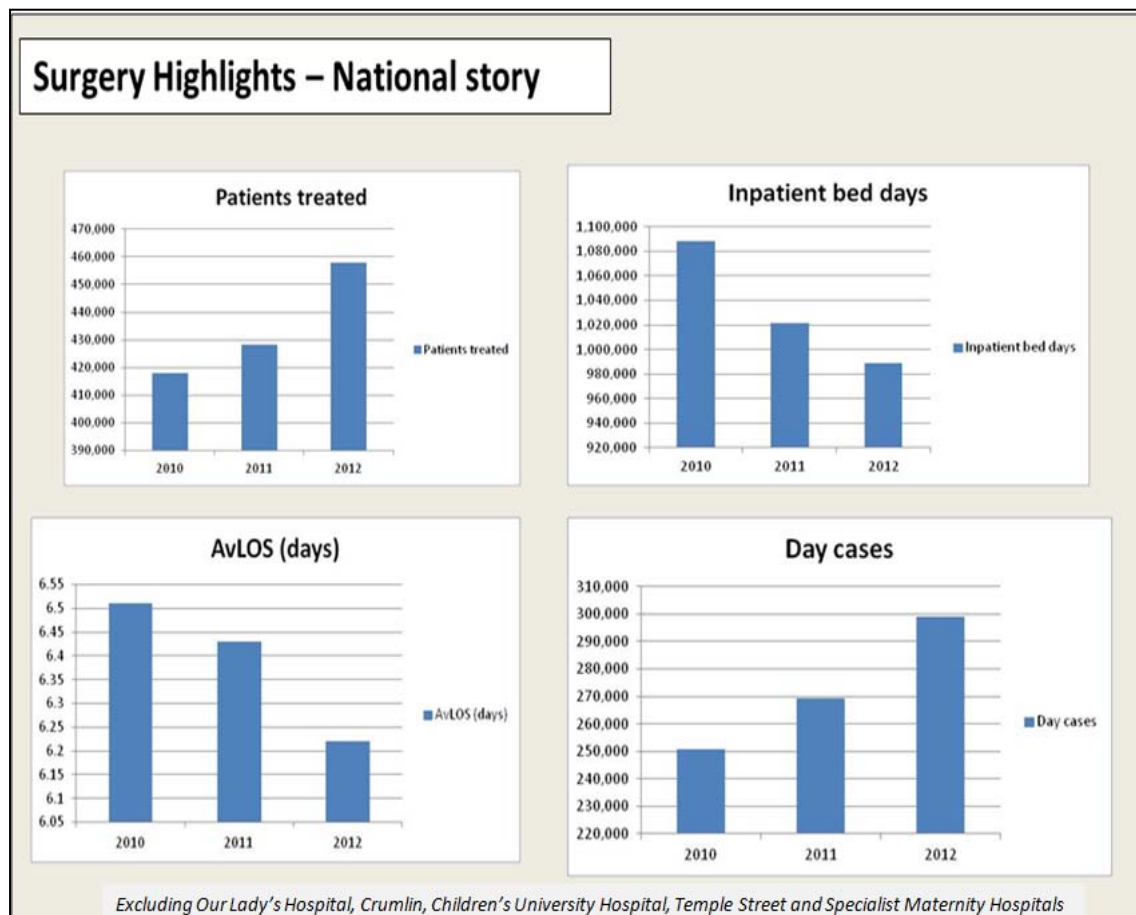


Figure 2: 2010 -2012 Trend for Surgical patients treated, Numbers of Surgical Inpatients, Average Length of Stay of Surgical Inpatients and Surgical Daycases.

Three new key performance indicators of surgical improvements were introduced in the National Service Plan 2013 and reported on monthly on the HSE Performance Report and Compstat system. In order for the targets to be attainable and appropriate, hospital specific targets were based on percentage improvements that were calculated for each acute hospital (excluding Maternity and specialist Paediatric hospitals). The achievement of these targets as of November 2013 are detailed in Figure 3:

KPI's for Average Length of Stay (AvLOS) , Day of Surgery Admission (DOSA) & Re-admission Rates YTD in November 2013 (Hospital PR reports):

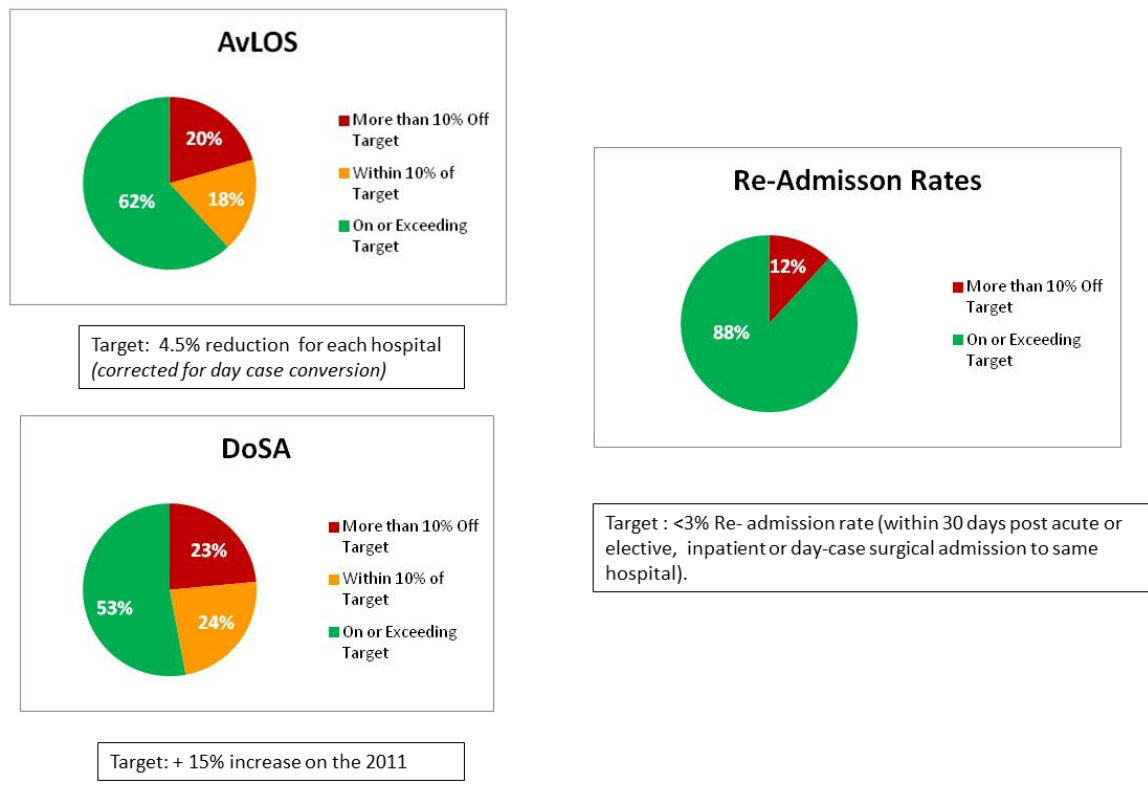


Figure 3: Surgical Key Performance Indicators

UNDERSTANDING THE SURGICAL WORKLOAD

From the HIPE data of 2012 (the last year of validated data) we know that in that year 474,828 patients had hospital treatment under surgical care (97,455 inpatients and 157,798 day patients had 376,036 surgical procedures). In addition, 67,989 inpatients and 151,586 day patients had a 'non-surgical type procedure', such as endoscopy or radiology intervention, or no recorded procedure. Of all inpatient admissions, 60.2% were acute. (Appendix 3, P.17)

This work is divided between 16 surgical sub-specialties. Our classification included the following: General Surgery which was divided into General – performed by most sub-specialties, General/Breast, General/Colorectal, General/Upper GI/panc/biliary and General/Vascular; the other specialties included Cardiothoracic, Gynaecology, Maxillofacial, Neurosurgery, Obstetrics, Ophthalmology, Otolaryngology, Paediatric Surgery, Plastic Surgery and Urology. Trauma & Orthopaedics was also sub categorised into Upper limb, Lower limb, Spinal and other.

Surgical sub-specialties differ in many ways and have different requirements. For example, Ophthalmic surgery is delivered predominantly as a day surgery service whereas Cardiothoracic surgery does little day surgery. Also, some surgical specialties perform more acute surgery while others are predominantly elective. All this means that direct comparison of hospital performance in Ireland is often misleading because of the variations in specialty mix and acuity that exists between hospitals. Comparison of surgical sub-specialty performance between hospitals is therefore a more valuable exercise but, even then, patient case mix and complexity have also to be born in mind.

The importance of HIPE data and its accuracy

In order to measure process outcomes, such as average length of stay and bed day usage, our analysis of HIPE data has been carried out by patient episode and by primary procedure. Primary procedures are important drivers of Diagnostic Related Groups (AR-DRG grouper) for surgery just as clinical diagnoses are for medicine (as well as secondary diagnoses, additional procedures, complications etc.) The DRG case based system will be the driver of 'Money Follows the Patient' (MFTP) which is to be introduced in 2014. It is most important that surgeons begin to understand the implications of this. (http://www.dohc.ie/publications/pdf/MoneyFollowsthePatient_HFPP.pdf?direct=1)

This states that Money Follows the Patient will use indirect price setting of best practice prices using patient level costs and that this will best support the policy goal of delivering quality care in the most appropriate setting. The new funding system will ultimately apply to episodes of care provided for, inter alia, In-patients, Day wards and all comparable episodes of care which are, or could be, delivered on a side room or outpatient basis. (Excluding, for the time being, outpatient services which are ancillary to a defined treatment or episode of care e.g. initial consultation, assessment and follow up). This form of resourcing of safely performed ambulant surgery in the right setting, properly structured, should bring about substantial savings including better use of main theatres and a shortening of waiting lists; planning should begin now.

NCPS analysis of HIPE data

For our purposes we mapped all primary procedures performed under surgery more than 20 times per year. This included 1,642 procedures (935 true surgical procedures and 707 other 'non-surgical' procedures), which accounted for over 98% of all procedures performed out of a total of more than 6,000 different procedures that were actually performed in 2012. The number of different procedure codes varied from specialty to specialty.

Procedures performed nationally >20/year by surgical sub-specialty		
	Surgical specialty	Proc's
BREAST	Breast Surgery	20
CARDTO	Cardiothoracic	33
COLORC	Colorectal	50
GENERL	General Surgery	94
GYNEAC	Gynaecology	74
MXFDNT	Maxillo-facial & Dental	37
NEUROS	Neurosurgery	34
OBSTET	Obstetric	13
OPHTHA	Ophthalmology	75
OTOLAR	Otolaryngology	82
PAEDIA	Paediatric Surgery	16
PLASTC	Plastic Surgery	44
TOLWRL	Lower Limb Trauma Orthopaedic	98
TORTHO	Trauma Orthopaedic	27
TOSPIN	Spinal Trauma Orthopaedic	18
TOUPRL	Upper Limb Trauma Orthopaedic	91
UGIHPB	Upper Gastrointestinal & Hepato-biliary	21
UROLOG	Urology	85
VASCUL	Vascular	40
XENSCP	Endoscopy	38
XNOSRG	Non-Surgical procedure	652
Total count of Procedures		1642

Figure 4: Number of procedures performed more than 20 times per year by each surgical sub-specialty.

Some sub-specialties performed relatively few types of procedures, such as Breast surgery but those that were performed were carried out very frequently. Sub-specialties that employed the greatest number of different procedure codes were Trauma Orthopaedics and General Surgery.

NCPS data supplied to each acute hospital (excluding Maternity and specialist Paediatric hospitals)

After interrogating the validated HIPE data of the previous year, the NCPS on an annual basis provides for each hospital, and for each surgical sub-specialty in that hospital (and subdivided into Acute and Elective for Inpatients) the following information:

- The number of each coded primary procedure performed (together with its code), the average length of stay (AvLOS), bed day usage and day of surgery admission rate (See Appendix 4, P.18, for national profile of Breast surgery).
- Day case numbers and Percentage (Day Cases /Total Cases × 100)

- The number of patients who have a 'non-surgical' procedure (by code)
- The number of patients who have no surgical or other procedure

Measuring primary procedures alone is not enough to assess workload

Surgeons and administrators want an accurate measure of work load and this will be important for MFTP. Measures of primary procedures alone, while satisfactory for process measurement, do not accurately reflect total workload particularly in those specialties that may perform multiple procedures during a single patient admission, such as in vascular surgery.

The penultimate column of the table at Appendix 3, P.17, shows the number of primary procedures performed by each sub-specialty while the last column shows the additional procedures performed by that sub-specialty over and above the primary procedures. The importance of measuring all procedures is emphasised when it is seen that, overall, measuring primary procedures alone underestimates surgical procedure activity by more than 19%. $(60,391/(60,391+255,254) \times 100)$

Other issues to be addressed when measuring workload

For completeness there are other issues that need assessing to provide a full picture of surgical workload that the NCPS will be or is addressing.

1. Casemix. At present the NCPS and National Clinical Programme in Anaesthesia recommend that all patients undergoing general or regional anaesthesia have a documented ASA Grade (as part of the National Safety Checklist).
2. Complexity. At present each procedure is counted equally no matter the complexity. The NCPS plans to develop a complexity scoring methodology for all procedures, initially those performed >20 times /year.
3. Second or supplementary procedures performed by a separate surgeon/sub-specialist also need to be taken account of. This occurs particularly in some specialties such as Plastic surgery.

CONSULTANT SURGICAL WORKFORCE

The surgical workforce should be matched to the workload that is required to be delivered. The initiative for the NCPS to undertake the present consultant workforce survey was prompted by Prof Eilis McGovern and HSE- MET who have been charged with undertaking overall medical workforce planning.

Workforce planning and data analysis in the medical arena is complex. Whilst there should be a close correlation between allocated surgical staffing resources and anticipated workload, this is often not matched either in Ireland or in any other country. Traditionally

Ireland has looked for direction from other countries as to its workforce requirements but the source of this information is often vague and without strong underlying science.

Nevertheless, when compared to other similar countries and even by conservative estimates we have very significant shortfalls in most surgical specialties, but especially in Trauma & Orthopaedic surgery. This shortfall is markedly behind what the Hanly report (2003) recommended for 2013 and Ireland has significantly less numbers of consultant surgical staff than Denmark, often cited as a paragon in the implementation of the EWTD. (Appendix 5, P.19)

This staffing shortfall requires careful consideration particularly when Ireland's relatively small pool of consultant surgeons is having to undertake greater workload and responsibility to meet:

1. Greater clinical demands imposed by lesser NCHD support as a result of EWTD.
2. Greater clinical demands that are required to ensure optimum availability of senior decision makers for the assessment of acute surgical admissions.
3. Greater teaching demands to deliver shortened surgical training.
4. Greater administrative/leadership demands to participate in management and healthcare reform.
5. Greater accreditation and performance demands to be met.
6. Increasing shortages of ancillary staff –nursing (especially theatres) and AHPs.

This situation is compounded by current difficulties in retaining graduates and recruitment which is being addressed by the Strategic Review of Medical Training and Career Structures Working Group. Also, any correction in staffing shortfall would have to be supported by appropriate support and infrastructure.

THE PRODUCTIVE OPERATING THEATRE (TPOT)

It is said that if the operating theatres of a hospital are working well and efficiently that hospital is also working efficiently.

This is because operating theatres have a central function within a hospital and are also both dependant and responsive to many other departments and services within hospitals.

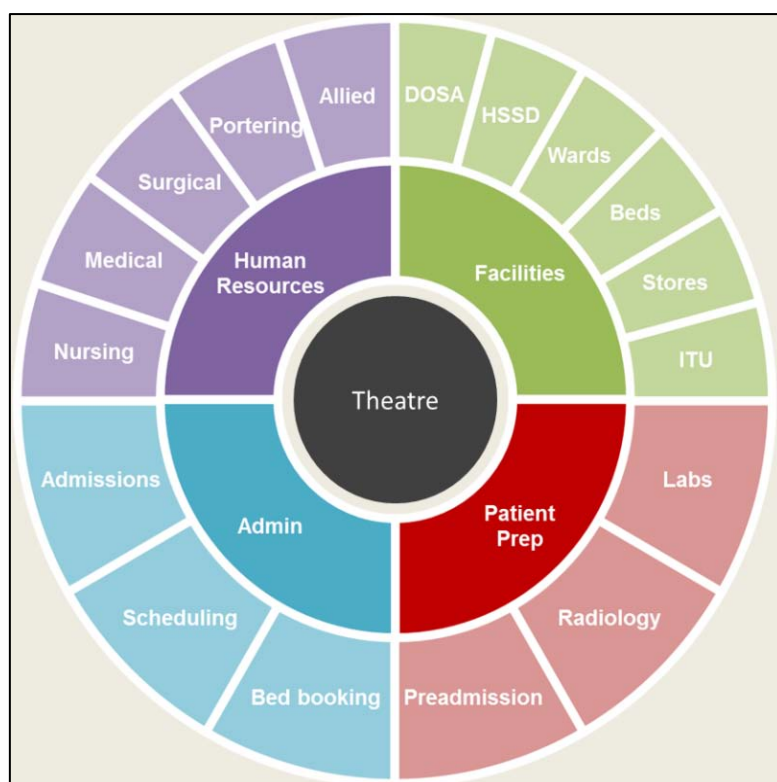


Figure 5: The operating theatre and its dependencies

Not alone this but they consume approximately 12% or more of hospital budgets. It is for these reasons that the NCPS regards the TPOT programme which is co-led by the National Leads of the Surgical Programme and the National Director of the Anaesthesia Programme, with such importance.

To date the TPOT Programme, delivered with the National Clinical Programme in Anaesthesia, has been challenged by limited resources, being sustained by one programme manager and the clinical leads. In the new year the Programme welcomes the full-time appointment of a TPOT nurse lead.

Nevertheless, to date 14 sites have undertaken the TPOT training course and engaged with the programme. Each site is followed up and supported and will be followed using a RAG status.

TPOT has been re-energised and supported by a TPOT Training course and update seminar in September 2013. A TPOT network has been developed for sharing and collaboration with a focus on positive, critical success factors and measures. The NCPS has developed a theatre usage monitoring tool (software programme) which is being rolled out to hospitals so that they can monitor their theatre usage both within and outside core hours so that hospitals can challenge themselves to avail of theatre time preferably during core hours, thus saving on out of hours work and overtime costs. (See example in Appendix 6, P.20)

It has been difficult to precisely state the savings that this programme has accrued so far, because hospitals do not precisely assess costs before and after an improvement is initiated. But we are sure they are substantial and some are illustrated in Appendix 7, P.21.

NCPS PLANS FOR 2014

These can be summarised as follows:

1. To continue engaging with and visiting acute hospitals and groups.
2. To continue with our ongoing Performance Monitoring, and extending into measures of complexity as well as better measurement of clinical and patient safety outcomes.
3. To continue to support improvements in Peri-Operative Governance and the allocation of designated elective and acute surgical beds and theatres.
4. To continue to encourage more accurate recording of HIPE data and more clinical involvement engagement with the inputting of same.
5. To liaise with the newly formed National Information and Pricing Office which has subsumed the relevant staff, functions and resources of the National Casemix Offices and the ESRI.
6. To continue to support the establishment of Acute Surgical Assessment Units.
7. To collaborate with other Clinical Programmes, notably Acute Medicine and Elderly Care (at the outset, but linking in with other programmes as required) and the SDU in setting standards of patient care and process for capacity planning and improving flow.
8. To continue with surgical manpower analysis in liaison with HSE-MET: NCHDs and ancillary and support staffing.
9. To continue engagement with the surgical sub-specialties.
10. To improve NCPS/TPOT communications, information giving and public relations.
11. To continue facilitation of The Productive Operating Theatre Programme in hospital. To develop and roll out a wholly Irish programme. (IPOT!) Our own experience suggests that this is widely desired.
12. To improve the delivery of Ambulant Surgery – surgery that may take place in a GP's surgery, the out-patients or a minor ops Unit, or in a substantive Day Surgery unit. Whilst Day Surgery is on the increase appropriate day facilities need greater protection and development. Also, there is evidence that some relatively minor procedures are carried out in Day Theatres which may be unnecessary for that procedure whereas they could have been performed in a minor ops unit or outpatient setting. At the same time, in some cases minor ops and outpatient procedures are being performed in OPDs which may not be counted in casemix. This will be part addressed by the move to patient level costing. (see 5 above)

13. To roll-out National Quality Assurance Intelligence System (NQAIS) for surgery - Mk 2. This is to provide hospitals and clinicians with a simple, visually friendly and more up to date, self assessment and performance monitoring tool. (See Appendix 8, P.22)
14. To support the development of integrated care pathways.

ACKNOWLEDGEMENTS

This work could not have been carried out without the enormous commitment of the NCPS Team to whom we are very grateful: Ms Mary Flynn, Ms Gerry Kelleher, Ms Emeka Okereke, Martha Ní Chuanaigh, Ms Niamh Keane, Ms Grace Reidy, Ms Therese Dalchan and Ms Catriona Caulfield.

We would like to thank RCSI for its support through the offices of the President, Professor Paddy Broe and CEO, Professor Cathal Kelly, and the Directorate of Surgical Affairs, notably Mr Eunan Friel and Mr Kieran Tangney.

We are grateful to the HSE for their support through the office of the Director General, Mr Tony O'Brien and through Dr Áine Carroll and all her team in the National Division of Clinical Strategy and Programmes. Similarly we have appreciated the support of Dr Philip Crowley National Director Quality and Patient Safety and Ms Lis Nixon of the SDU and their teams.

We work closely with other National Clinical Programmes and appreciate their help and co-operation. We would highlight, in particular, Trauma and Orthopaedics (Mr David Moore, Mr Paddy Kenny and Ms Catherine Farrell) and Anaesthesia (Dr Bairbre Golden).

There are many other programmes and colleagues who are too numerous to mention but are equally deserving of our thanks.

We look forward to facing the challenges of the next year together.

Professor Frank Keane and Mr Ken Mealy
Joint Leads, National Clinical Programme in Surgery

APPENDIX 1

NCPS Committees and Work streams

- RCSI Committee for Surgical Affairs
- Unscheduled Care Group (**Aine Carroll**)
- National Clinical Programme in **Anaesthesia** CAG
- Expert Advisory Group on HIQA Health Technology Assessments (**HTAs**)
- National Office of Clinical Audit (**NOCA**)
- **Safe Surgery** Policy and Procedure Meeting (QPS)
- National Leads Workshop on **Research Collaborative** (QPS)
- National Retrieval (**Transport**) Steering Committee
- National **Patient Safety** Advisory Group
- National **Sepsis** Steering Group
- National Early Warning Score (**NEWS**) and COMPASS Group
- NCPS and **SDU** Working Group
- **Doctor Migration** Project

Documents: NCPS co-preparation or appraisal

- **Small Hospitals** Document
- Safe Surgery National **Checklist**
- **Critical Care** Model of Care
- **Emergency Medicine** Model of Care
- Paediatric Programme Report on **General Paediatric Surgery**
- Surgical **reconfiguration in Cork**
- Comptroller and Auditor General **Report on Day Surgery**
- Various **Parliamentary Questions** and reports eg OECD report on Post-op Sepsis
- Output of Consultants Application Advisory Committee (**CAAC**)
- 2014 HSE **Service Plan**
- **Communications** (Newsletter, Website Upgrade, Interview with Leads)

APPENDIX 2

Hospital Visits				
Hospital	2011	2012		2013
Beaumont Hospital		28th February	11th October	
Our Lady of Lourdes Drogheda			18th October	
Connolly Hospital		15th June		28th February
Cavan General Hospital				28th February
				20th February
Louth County Hospital				28th February (Combined with OLOL)
				20th February (Combined with Cavan)
Monahan Hospital				16th January
St. James Hospital				14th February
Tallaght Hospital (AMNCH)	14th December			16th May
Midland Regional Hospital, Tullamore		12th July	15th November	
Naas General Hospital				7th February
Midland Regional Hospital, Portlaoise				1st August
Mater Hospital		22nd February	13th September	21st November
St. Vincent's University Hospital				24th January
Midland Regional Hospital, Mullingar		5th April		4th July
St. Luke's Kilkenny		21st March		11th July
Wexford General Hospital		1st November		
				2th February (Combined with OLOL)
Our Lady's Hospital, Navan				
St. Columcille's Hospital				
St. Michael's Hospital, Dunlaoighaire				
Cappagh National Orthopaedic Hospital				13th February
Cork University Hospital		29th March	6th December	21st March
Waterford General Hospital				11th April
Kerry General Hospital		26th April		25th April
Mercy University Hospital		24th May		21st March (Gro
South Tipperary General Hospital		26th June	3rd October	
South Infirmary Victoria University Hospital		24th May		21st March (Gro
Bantry				21st March (Gro
Mallow				21st March (Gro
				11th April (Combined with Waterford)
Orthopaedic Hospital Kilcreene				
University Hospital, Galway		19th April	18th November	
Sligo General Hospital		18th June	22nd November	
Letterkenny General Hospital	30th November			13th May
Mayo General Hospital		26th March		26th March
		19th April (Combined with GUH)	18th November (Combined	
Portlincula Hospital		19th April (Combined with GUH)	18th November (Combined	
Roscommon County Hospital				
Limerick University Hospital		23rd January		21st February
				21st February (Combined with UL)
Ennis General Hospital				21st February
Nenagh General Hospital				21st February (Combined with UL)
St. John's Hospital, Limerick				21st February (Combined with UL)
				21st February (Combined with UL)
Mid-Western Regional Orthopaedic Hospital				

APPENDIX 3

Acute and Elective Inpatient Surgical Admissions and Day Cases performed in 2012

											Additional Work Load Non Prime Procs
Acute and Elective		Inpatient					DayCase		Total num		
Surgical Specialties		Num	BDU	AvLOS	PreBDU	PreAvLOS	DOSA	Num	DC %	Prime Proc	
BREAST	Breast Surgery	2,416	9,334	3.86	1,427	0.59	59.0%	6,211	72.0%	8,627	3718
CARDIO	Cardiothoracic	2,549	42,125	16.53	9,860	3.87	9.9%	93	3.5%	2,642	3494
COLORC	Colorectal	3,520	57,480	16.33	11,092	3.15	35.3%	993	22.0%	4,513	1225
GENERAL	General Surgery	22,415	120,672	5.38	28,790	1.28	55.4%	16,262	42.0%	38,677	11762
GYNEAC	Gyneacology	5,899	25,974	4.40	5,315	0.90	49.4%	13,788	70.0%	19,687	11233
MXFOND	Maxillofacial & Dental	958	4,668	4.87	1,425	1.49	37.7%	3,080	76.3%	4,038	1544
NEUROS	Neurosurgery	2,635	26,118	9.91	6,658	2.53	20.8%	10	0.4%	2,645	415
OPHTHA	Ophthalmology	2,455	9,184	3.74	2,561	1.04	52.8%	32,418	93.0%	34,873	2198
OTOLAR	Otolaryngology	9,936	30,489	3.07	5,699	0.57	74.5%	14,953	60.1%	24,889	4807
PAEDIA	Paediatric surgery	778	2,242	2.88	675	0.87	69.8%	4,404	85.0%	5,182	369
PLASTC	Plastic surgery	2,464	14,385	5.84	4,312	1.75	37.6%	26,119	91.4%	28,583	7650
TOLWRL	Trauma Orthopaedic - Lower limb	16,090	140,588	8.74	18,923	1.18	50.3%	4,364	21.3%	20,454	1784
TORTHO	Trauma Orthopaedic - other	1,296	7,725	5.96	1,809	1.40	49.3%	3,028	70.0%	4,324	1088
TOSPIN	Trauma Orthopaedic - Spine	1,074	10,176	9.47	2,323	2.16	29.4%	934	46.5%	2,008	431
TOUPL	Trauma Orthopaedic - Upper Limb	7,477	18,935	2.53	5,823	0.78	50.2%	5,941	44.3%	13,418	1511
UGIHPB	Upper Gastrointestinal & Hepatobiliary	758	12,282	16.20	1,699	2.24	46.4%	281	27.0%	1,039	1038
UROLOG	Urology	7,572	49,068	6.48	14,794	1.95	36.3%	20,369	72.9%	27,941	4960
VASCUL	Vascular	3,186	39,003	12.24	12,892	4.05	36.5%	2,709	46.0%	5,895	1104
WNOMAF	Pro-rata unmapped procs (< 20pa)	3,977	34,031	8.56	6,962	1.75	41.7%	1,841	34.8%	5,819	
Sub-total - have surgery		97,455	654,479	6.72	143,039	1.47		157,798	61.8%	255,254	
Surgical admit - non surgery primary procedures											
WNOSRC	Non-surgical common proc (> 20pa)	28,978	214,088	7.39	51,431	1.77	39.0%	61,912	68.1%	90,890	
WENSCP	Endoscopy	7,435	42,925	5.77	16,170	2.17	27.6%	58,055	88.6%	65,490	15,182
WTORTHO	Non-surgical Trauma Orthopaedic	807	4,113	5.10	1,257	1.56	41.6%	11,672	93.5%	12,479	3,764
WXNOPF	No primary Procedure coded	27,994	76,862	2.75				18,178	39.4%	46,172	
WNOMAF	Pro-rata unmapped procs (< 20pa)	2,775	23,742	8.56	4,857	1.75	41.7%	1,769	34.8%	4,543	
Sub-total - do not have surgery		67,989	361,730	5.32	73,715	1.08		151,586	69.0%	219,574	
Grand Total											
		165,444	1,016,209	6.14	216,754	1.31	38.0%	309,384	65.2%	474,828	

Abbreviations: Num = number; BDU = Bed Days used; Proc(s) = Procedures; DC = Day Case(s);
pa = per annum

APPENDIX 4

Inpatient length of stay and percentage day case analysis for breast surgery primary procedures for hospitals performing breast surgery

Procedure Description (ICD 10 Code)	Acute Inpatient					Elective Inpatient					Total Inpat	Total DC	DC %	Total All
	Num Cases	BDU	AvLOS	Pre-op BDU	Pre-op AvLOS	Num Cases	BDU	AvLOS	Pre-op BDU	Pre-op AvLOS				
Core biopsy of breast (3154800)	28	494	17.64	127	4.54	15	59	3.93	25	1.67	43	3,636	98.8%	3,679
Excision of lesion of breast (3150000)	35	75	2.14	16	0.46	767	1,607	2.10	264	0.34	802	1,646	67.2%	2,448
Simple mastectomy, unilateral (3151800)	12	51	4.25	6	0.50	757	3,679	4.86	381	0.50	769	8	1.0%	777
Re-excision of lesion of breast (3151500)	2	3	1.50	1	0.50	99	287	2.90	42	0.42	101	284	73.8%	385
Excision of lymph node of axilla (3033200)	21	298	14.19	98	4.67	42	155	3.69	50	1.19	63	188	74.9%	251
Reduction mammoplasty, bilateral (4552201)	1	1	1.00	0	0.00	176	442	2.51	82	0.47	177	7	3.8%	184
Sentinel lymph node biopsy (3030000)						26	69	2.65	9	0.35	26	103	79.8%	129
Radical excision of lymph nodes, axilla (3033600)	5	29	5.80	18	3.60	103	361	3.50	41	0.40	108	4	3.6%	112
Recon breast using myocutaneous flap (4553000)	3	12	4.00	2	0.67	99	687	6.94	78	0.79	102	2	1.9%	104
Simple mastectomy, bilateral (3151801)						67	354	5.28	33	0.49	67	4	5.6%	71
Excision of duct (central) of breast (3155700)						5	12	2.40	1	0.20	5	65	92.9%	70
R/O & replace breast prosth w exc capsI (4555200)	1	4	4.00	0	0.00	43	122	2.84	24	0.56	44	23	34.3%	67
Reconstruction of nipple (4554500)	0	0		0		6	8	1.33	1	0.17	6	60	90.9%	66
Localisation of lesion of breast (3153600)						14	71	5.07	48	3.43	14	51	78.5%	65
Removal of breast prosthesis (4554800)	13	80	6.15	29	2.23	21	72	3.43	12	0.57	34	19	35.8%	53
Subcutaneous mastectomy, unilateral (3152400)						30	165	5.50	14	0.47	30	9	23.1%	39
Open biopsy of breast (3150001)	3	53	17.67	8	2.67	2	4	2.00	2	1.00	5	32	86.5%	37
Microdochotomy of breast (3155400)	0	0		0		1	1	1.00	0	0.00	1	32	97.0%	33
Regional excision lymph nodes of axilla (3033500)	1	9	9.00	2	2.00	17	69	4.06	13	0.76	18	14	43.8%	32
Other procedures on breast (9072000)	0	0		0		1	1	1.00	0	0.00	1	24	96.0%	25
Breast Surgery Total	125	1,109	8.87	307	2.46	2,291	8,225	3.59	1,120	0.49	2,416	6,211	72.0%	8,627
AvLOS and Day Case metrics based on an analysis of primary procedures classified as Breast Surgery and coded on episode discharges in HIPE for 2012														

Abbreviations: as in Appendix 3

APPENDIX 5

Table 1 The Consultant Surgical Workforce (Public & Private) Compared to Similar Countries

	Ireland	Australia	New Zealand	England	Wales	International Average
Specialty	Public & Private Combined					
Cardio- thoracic	20	- 14	- 4	- 8	0	- 9
General/Vascular	195	- 144	- 60	+ 16	- 7	- 31
Neuro	23	- 20	+ 2	+ 2	+ 6	- 4
Ophthalmology	65			- 9*	- 16*	- 10
Oral & Maxillio	10			- 19	- 37	- 20
Otolaryngology (ENT)	57	- 28	- 23	+ 6	- 10	- 5
Paediatric	8	- 10	- 9	- 5	- 1	- 6
Plastic	35	- 41	- 23	+ 4	+ 14	- 9
Trauma & Orthopaedics	123.5	- 115	- 142	- 59	- 92	- 79
Urology	52	- 19	- 2	- 12	- 15	- 13
TOTAL	588.5					-186

Table 2: The Public Consultant Surgical Workforce Compared to Hanly and Denmark

Ireland			Denmark
Specialty	Public Only	Shortfall compared to Hanly (2003) Recommendation for 2013	Shortfall
Cardio- thoracic	18	- 8	-58
General/Vascular	171	- 44	-258
Neuro	14	- 5	-37
Ophthalmology	34.5	- 45	
Oral & Maxillio	8	- 22	
Otolaryngology (ENT)	44	- 21	-232
Paediatric	7	- 8	
Plastic	23	- 24	-48
Trauma & Orthopaedics	87	- 97	-423
Urology	34	- 23	-74
TOTAL	440.5	- 297	

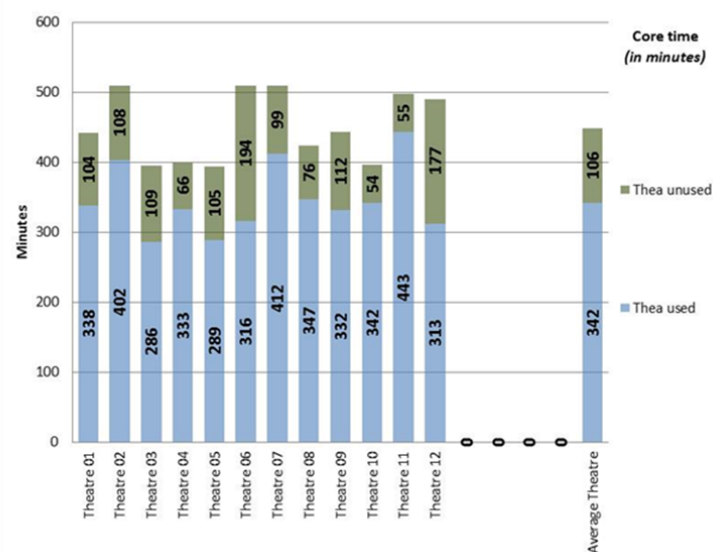
Note 1: Minus signs refer to the number that Ireland is short based on consultant numbers per 100,000 of the population

Note 2: Source References supplied on request and will be provided in a fuller publication.

APPENDIX 6

Example of Hospital Theatre Utilisation Over One Week

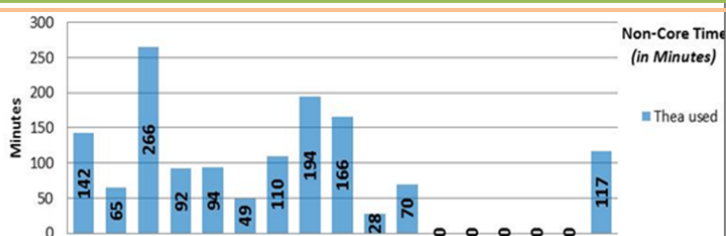
Daily Average Theatre occupancy



Core Time Activity:

In this example, 'core time' utilisation was 76%
270 patient operations performed

Encourage increase activity within core hours



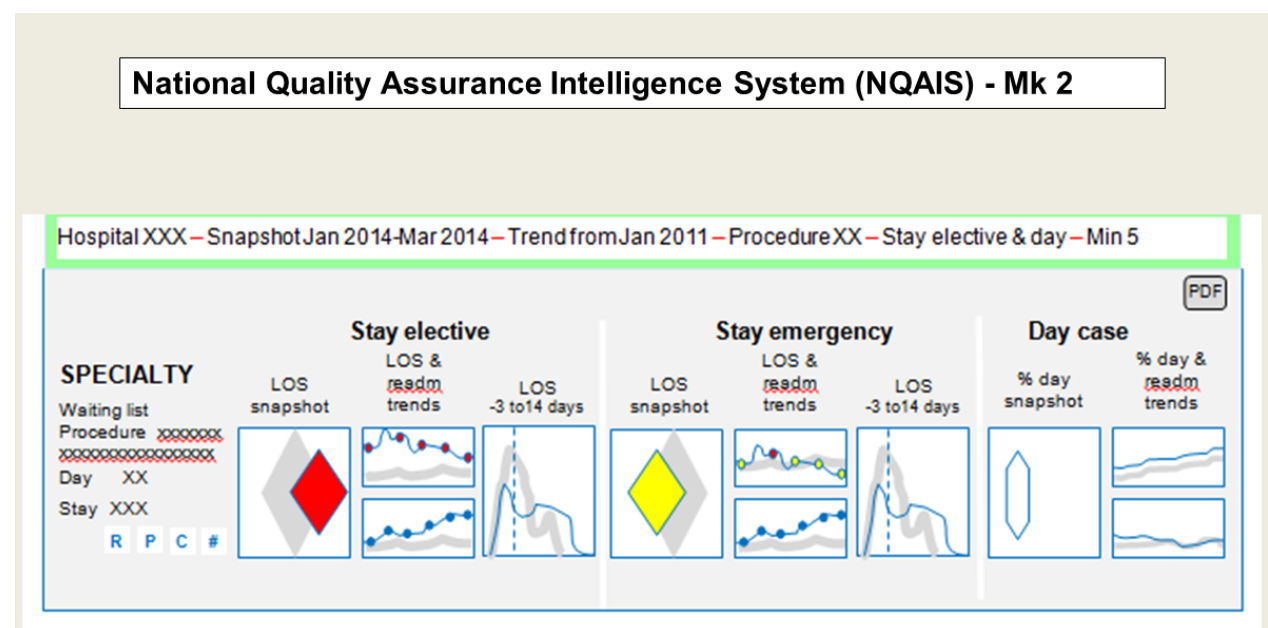
Out of Hours Activity:

Encourage the reduction in out of hours activity

APPENDIX 7

Hospital	Initiative	Improvement
A	Theatre Utilisation 2013 compared to 2012	Treated +11% patients in core hours ↓ out of hours activity - 14 mins/day/theatre. Amounts to approx. 14 hours/week or 500 hours/year for a 12 theatre complex
B	Customised Packs rationalisation 2013	Estimated savings €304,000 in 2014
	Day of Surgery Admission	Lounge opened in Jan 2013; 20 patients/month. Expanded service up to 240 patients/month in Jul 2013
	Inventory & space saving in Trauma and Plastics Theatre	Provided a new minor ops room Unwanted stock reallocated. Approx €8,000 saving
C	5S - Inventory & Ordering in General Theatre Store Room	Inventory Savings €43,304 Released 10.25% of Nursing WTE
D	Consumable and Equipment Re-tender	Savings €21,870

APPENDIX 8



For any procedure or group of procedures the pictogram will provide clinicians and managers with an easy to interpret view on length of stay and re-admission rates for patients listed as elective or acute, in addition to the day case rate for a procedure. These represent examples from a list of a number of other selected parameters.