

Patient follow-up essential for accurate data on surgical complications

Findings from the United Kingdom Surgical Complications and Outcomes (UKGOSOC) Audit

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Background

Published data on surgical complications are generally based on hospital-based/clinician reported data

- Retrospective case-note review
- Prospective audits- data entered contemporaneously

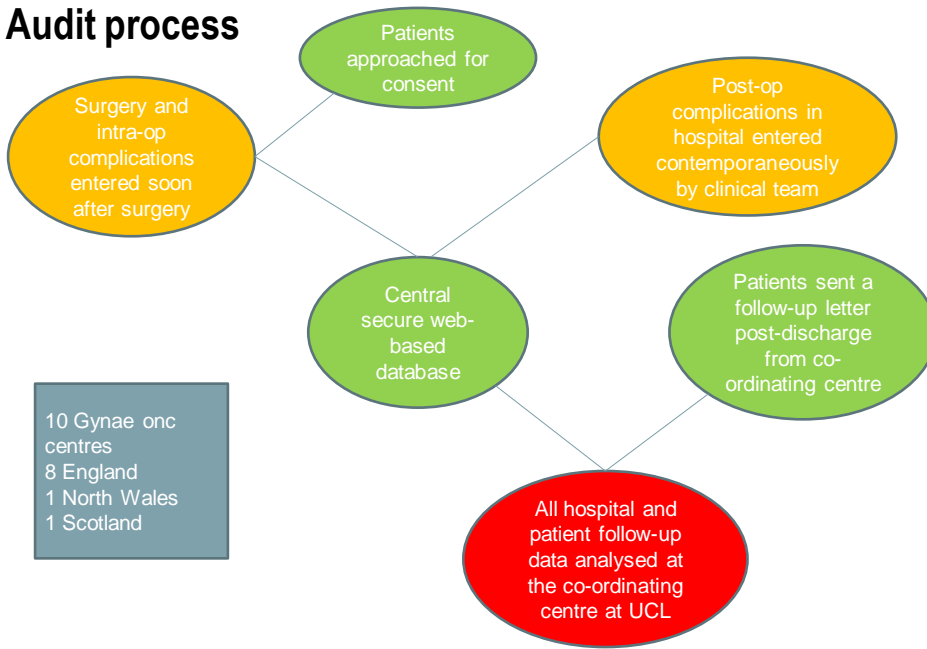
HES data- prospective data collection-
problems with incorrect coding of procedures
only those complications with readmissions or returns to theatre available

- Limited data available on gynae oncology surgery complications
- HES data contains surgery data and re-admissions and returns to theatre
- Cancer care in the UK centralised
- Complications suffered post-discharge managed in primary care or local hospitals can be missed

Background

- UKGOSOC
- Set up to capture data on complications in gynae-oncology surgery
- Contemporaneous data capture
- Multi-centred
- Prospective
- Both hospital and patient-reported complications data captured

Audit process



Objectives of this study

- (1) what is a feasible questionnaire format for collecting patient-reported data on postoperative complications?
- (2) What is the concordance between patient-reported and hospital-reported postoperative complications?
- (3) What is the difference in the estimates of overall postoperative morbidity according to data source?

Follow up questionnaire

- Initially free-text format
- *‘Have you had a complication following your gynaecological surgery? If so, please give details’*
- Later on questionnaire format developed following analysis of the responses to the free-text format.
- 11 common complications reported on free-text format
- Specific questions on management
- Simple yes/no answers, minimal free-text

A surgical complication may be defined as ‘an undesirable and unintended result of an operation affecting the patient that occurs as a direct result of the operation’.

- Below is a list of 11 common complications experienced by patients.
- Even though the list appears long, it should only take approximately five minutes of your time.
- Please choose the complication/s that is most appropriate and indicate the treatment you required.
- You may choose more than one option.
- However if your complication is not on the list, please use the free text space provided.
- Please use additional paper if necessary.

Did the wound get infected or did it breakdown?	Yes	No
If the answer is yes, how was this treated?		
a. Antibiotics	Yes	No
a. Regular dressing of the wound	Yes	No
a. Required re-admission to hospital	Yes	No
a. Cleaning (debridement) in the operating theatre	Yes	No
a. Re-suturing in the operating theatre	Yes	No
a. Other (please give details)	Yes	No

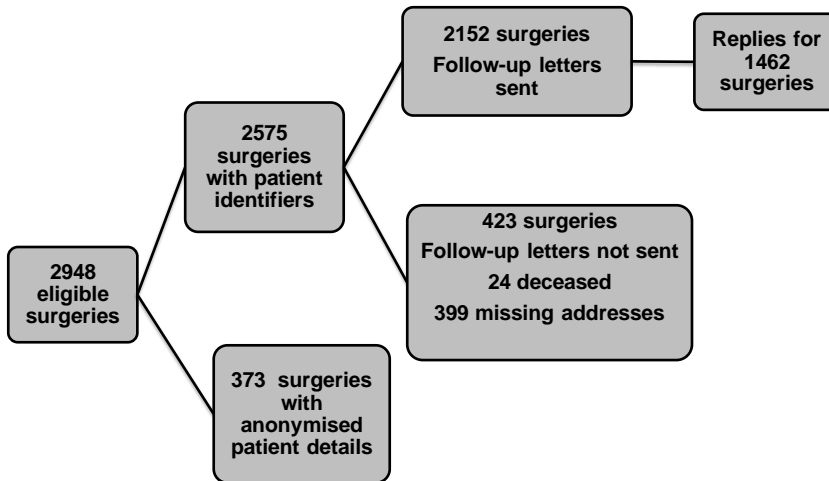
Analysis

- All data analysed in the co-ordinating centre
- Patients contacted directly by phone for any equivocal replies
- All follow-up replies analysed and complications classified and graded by the same clinician at the co-ordinating centre

Clavien and Dindo grading of post-operative complications

Grade 1	Any deviation from the normal postoperative course without the need for pharmacological treatment or surgical, endoscopic and radiological interventions
	Allowed therapeutic regimens are: drugs as antiemetics, antipyretics, analgesics, diuretics, electrolytes, and physiotherapy. This grade also includes wound infections opened at the bedside
Grade II	Requiring pharmacological treatment with drugs other than such allowed for grade I complications. Blood transfusions and TPN are also included
Grade III	Requiring surgical, endoscopic or radiological intervention
IIIa	Intervention not under general anaesthesia
IIIb	Intervention under general anaesthesia
Grade IV	Life-threatening complication (including CNS complications- excludes TIA)* requiring IC/ICU management
IVa	Single organ dysfunction (including dialysis)
IVb	Multiorgan dysfunction
Grade V	Death of a patient

Results



Results

Free-text format

- 1787 surgeries
- 1197 (67%) replies
- 265 reported complications(22%)
- 20 related to chemotherapy, 4 intra-op complications – excluded
- 265 post-op complications – 67 Grade 1 (excluded), **198 Grade II-V (57 already reported by hospital)**

Questionnaire format

- 365 surgeries
- 265 replies (73%)
- 165 reported complications (62%)
- 1 not related to surgery and 4 intra-op complications
- 212 post-op complications – 94 grade 1 (excluded), **117 Grade II-V (6 previously reported by centres)**

Concordance of patient-reported complications (clinician verified)

- **Grade III-V** (complications with serious sequelae) including two peri-operative deaths
- Total 36
 - 17 previously reported by hospital
 - Remaining 19 all confirmed – **100% concordance for Grade III-V**
- **Grade II**– (complications requiring medical therapy)
- Total 280
 - 46 previously reported by hospital
 - Out of remaining 234, 113 verified by clinician verification from hospital records
 - One incorrect – PE present prior to surgery- excluded

Concordance for Grade II – $46+112/280 = 56.4\%$

Sensitivity of patient and hospital reporting

Data source	No. of Grade II-V complications	Sensitivity (95%CI)	
		Patient reporting	Hospital reporting
All Grade II-V complications			
Patient reporting using free-text format			
Patient-reported alone	141	64% (58-69)	55% (49-60)
Patient & Hospital reported	57		
Hospital reported alone	113		
Total	311		
Patient reporting using questionnaire format			
Patient-reported alone	111	83% (76-88)	21% (15-29)
Patient & Hospital reported	6		
Hospital reported alone	24		
Total	141		
Patient reporting using both formats			
Patient-reported alone	252	70% (65-74)	44% (40-49)
Patient & Hospital reported	63		
Hospital reported alone	137		
Total	452		

Sensitivity of patient and hospital reporting

Data source	No. of Grade II-V complications	Patient reporting	
		Patient reporting	Hospital reporting
Patient reporting using both formats excluding complications not confirmed by the hospital (n=121*)			
Patient reported alone	131	59% (53-64)	60% (55-66)
Patient & Hospital reported	63		
Hospital reported alone	137		
Total	331		
Grade III-V Complications only			
Patient reporting using both formats			
Patient-reported alone	19	72% (58-83)	62% (48-74)
Patient & Hospital reported	17		
Hospital reported alone	14		
Total	50		
*108 Grade II, 13 notes not checked			

Types of complications reported by patients and hospital

Patient reporting (total 252)

- Wound breakdown (37%)
- Infections (urinary tract and chest infections) (30%)
- Lymphoedema / Lymphocysts (12%)

Hospital reporting (total 200)

- Infections (26%)
- Wound breakdown (24%)
- Ileus (7%)
- Bladder related complications (7%)

Proportion of surgeries with a post-operative complication

- **Grade II-V**
 - Hospital-reporting alone: 11.8% (172/1462; 95% CI 11–14)
 - Patient reporting alone : 15.8% (231/1462; 95% CI 14 –17.8)
 - Hospital and hospital verified patient follow-up data: 19.4% (283/1462; 95% CI 17.4- 21.4)
 - Using hospital and all patient follow-up data: 25.9% (379/1462; 95% CI 24-28)
- **Grade III-V**
 - Hospital-reporting alone : 2% (29/1462)
 - Hospital and hospital verified patient follow-up data: 3.3% (48/1462)

Conclusion

- Both hospital and patient data sources required to capture the true morbidity from surgery
- On most occasions patients correctly report complications
- Verification of patient reported data from hospital records alone not sufficient as complications requiring medical therapy likely to have been managed in primary care or in a different hospital
- Analysis and Grading of patient-reported complications easier with questionnaire format

- Use of PROMs in gynae-oncology
- Is there a role for combining PROMs and complications questionnaire?

Thank you