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Implementation of a checklist to enhance skin operation note quality at a tertiary UK plastic surgery centre

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INTRODUCTION

The importance of good quality surgical operation-notes has been well documented over the years.[1-3] Being the only step-by-step evidence of the procedure that has taken place, operation-notes exist as vital communication between the multi-disciplinary team for both current and future patient care[4]. Within plastic surgery, a significant proportion of the elective and semi-urgent caseload relates to procedures such as excision of skin lesions, particularly through skin cancer pathways. Accurate documentation of parameters such as margins, depth of excision and details of histopathology specimens is key for MDT planning. It is therefore vital that there exist standardised and reliable methods of documentation with ubiquitous uptake by whole centres, if not nationally.

AIMS

This study aims to investigate the current standards of skin operation-notes within a single, tertiary- plastic surgery department, against the Royal College of Surgeons Good Surgical Practice Guidelines, with an aim to improve clinical practice through the implementation of a procedure-specific proforma.

MATERIALS/METHOD

- ***Proforma design***

A 23-component proforma of the operation note was designed based on the 2014 Good Surgical Practice guidelines,[1] and modified to skin surgery. Components considered critical to skin surgery including previous biopsy results (if any), margins, depths of excision, donor site closure, dressings used, histology details, follow up plans including graft and wound check dates were incorporated

- ***Data Collection***

40 operation notes were analysed prior and after proforma implementation retrospectively. The compliance was evaluated against components included in our checklist.

- ***Statastical analysis***

All statistical analysis was performed using Microsoft Corporation. Microsoft Excel [Internet]. 2018. Comparison of pre- and post-implementation compliance based on paired categorical data for each component was tested using Fisher's exact statistical test. A p-value of <0.05 was considered to be significant.

RESULTS

Figure 1: Skin operation specific proforma

SKIN OPERATION NOTE
QVH THEATRES
Queen Victoria Hospital NHS Foundation Trust

PATIENT DEMOGRAPHIC:		DO NOT WRITE IN THIS SECTION	
PATIENT SURNAME:			METADATA
PATIENT FORENAME(S):			
NHS NUMBER:	AFFIX PATIENT ID	Form Version:	V0.1
HOSPITAL NUMBER:	LABEL HERE	Version Owner:	FULL PRINTED NAME
DATE OF BIRTH:		Original Template Location:	N:\EDM Project Management\bForms\Completed
		Date of PDG Approval: DD/MM/YY	Date of EDM Approval: DD/M/YY

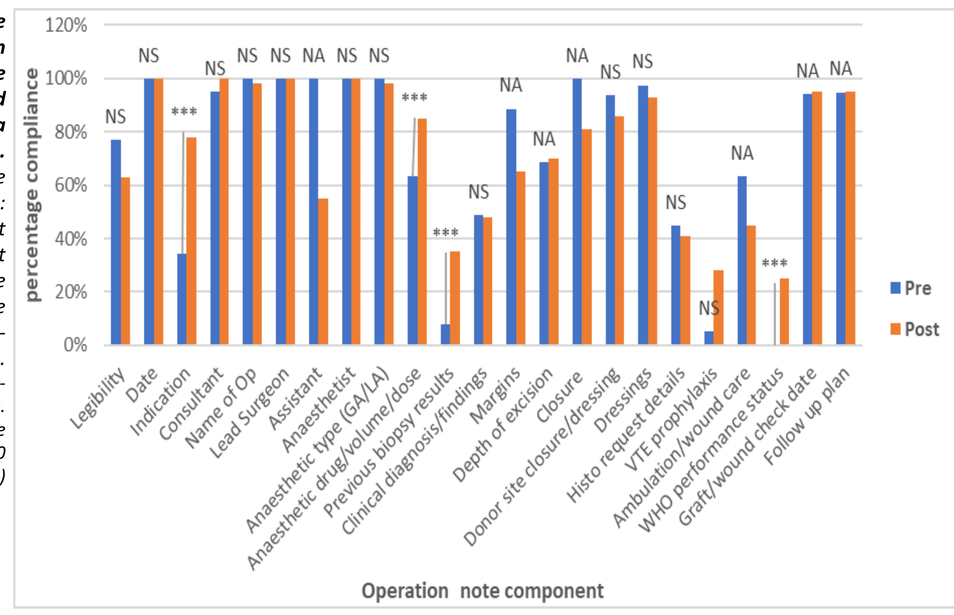
Procedure (including anatomical site):	
Date:	**Anaesthetist:**
Surgeon(s):	**Anaesthetic type:** Choose an item.
Responsible Consultant:	**Local anaesthetic drug and volume:**
Indication:	
Dermatome Safety Checklist: Done: ☐ N/A: ☐ **Previous Biopsy results:** N/A ☐ Reviewed ☐ **Details:** Click or tap here to enter text. **WHO performance status:** Choose an item.	
Findings/clinical diagnosis:	
Operation Details: **Diagram:**	**Details of excision:** **Depth:** Click or tap here to enter text. **Margins:** Choose an item. **Marker suture:** Choose an item. **Closure:** Click or tap here to enter text. **If skin graft taken:** **Donor site:** Click or tap here to enter text. **Thickness:** Choose an item. **Mesh ratio (if applicable):** **Closure:**Click or tap here to enter text. **Dressings:** **Graft/operation site:**Click or tap here to enter text. **Donor site:** Click or tap here to enter text.

Post-operative care:	**If N/A please tick:**
1. **Rest/Elevation/Weight bearing status:**	☐
2. **Wound/graft check:**	☐
3. **Removal of sutures:**	☐
4. **Follow up:**	☐
5. **Re-start anticoagulation:**	☐

SIGN: **PRINT:** **DATE:**

RESULTS

Figure. 2: Percentage compliance for each operation note component pre- and post-proforma implementation. *Statistical significance denoted by: ***p<0.00001, NS not significant, NA not applicable (percentage decreased post-implementation). (Post implementation-10/40 used proforma. Results here are indicative for all 40 notes assessed.)*



1. Following implementation of the proforma, there were statistically significant improvements in all components, where the proforma was used (10/40 proforma op notes were completed with 100% recording of all 23 components).
2. There was an overall (combined results of with and without proforma post-implementation) significant improvement in four components including indication of surgery (78% from 34%), anaesthetic volume/dose used (85% from 63%), if any previous biopsies were taken (35% from 8%), and WHO performance status of the patient (25% from 0%) (P<0.00001).
3. There were however some key components that underwent a further reduction in recording, where the proforma was not used, including details of assistant operator, margins taken, details of closure and ambulation/wound care information.
4. Overall comparison of the pre- and post-implementation results demonstrated that the median percentage score of components increased to 100 when the operation notes using the proforma were compared to that pre-implementation.

CONCLUSIONS

1. When used, the proforma was found to improve quality and compliance with the RCS Guidelines to 100% in all domains. This was particularly evident in the domains of indication, previous biopsy results, clinical findings, depth of excision, histology request details and post-operative wound care advice. All the above domains are vital within the cancer pathway.
2. Only one other study has investigated the impact of an operation note proforma in skin surgery, demonstrating an overall significant improvement in compliance with RCS recommendations.[3]
3. Good quality operation notes have impacts on both patient and provider.[2] Benefits to hospitals include increasing the efficiency of care by preventing delays in discharge and ensures accurate coding of procedures and subsequent remuneration.
4. For the patient, clear operation notes facilitate multidisciplinary teamwork (especially pertinent in cancer care) and therefore acts to streamline patient pathways by ensuring appropriate post-operative care and follow-up.
5. In the context of potentially serious legal repercussions as well as a threat to the sustainability of the NHS, good quality operation notes ought to be a priority for any surgeon.
6. Our single study centre with a small sample size may have reduced the precision of the reported results; along with this the limited uptake during operation note writing, highlighting the need for ongoing multi-disciplinary involvement in the implementation of such an intervention.
7. A simple proforma such as this can be easily implemented across allied specialities such as OMFS and Dermatology where there has been an increase in skin surgery to allow standardization of record keeping

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