Storyboard submission

Follow the detailed instructions in this template for writing a description of your storyboard. Type your information in each section below and save this completed storyboard document as a Microsoft Word file.

Please spell check your storyboard before submission as it will be published on the NHS Wales Awards website.

*Please note: The storyboard should be between 500 – 1000 words maximum (including references but excluding headings, images or graphs)*

Submit your storyboard using the online submission system at [www.eventsforce.net/nhsawards2013](http://www.eventsforce.net/nhsawards2013) by **Friday 25 January 2013**.

1. **Storyboard Title**

Centralised regional upper gastrointestinal cancer services improve patient safety, quality of care and survival significantly.

2. **Brief Outline of Context** *(Where this improvement work was done; what sort of unit/department; what staff/client groups were involved)*
South East Wales (SEW) has a population of 1.4 million, served by 3 NHS LHBs; Cardiff and Vale UHB (catchment population 450,000), Aneurin Bevan LHB (600,000) and Cwm Taf LHB (325,000). These HBs are accountable for 4 district general hospitals and 2 teaching hospitals, constituting the SEW UGI Cancer Network (SEWCN), served by a multidisciplinary team (MDT) of 128 health professionals. Prior to 2010 the surgical care of UGI Cancer patients was delivered by 9 Surgeons at 4 hospital sites.

3. Brief Outline of Problem (Statement of problem; how they set out to tackle it; how it affected patient/client care)

NHS Wales Cancer Service Reconfiguration driven by Improving Outcomes Guidance (IOG, 2000) had by 2009 only resulted in compliance by Betsi Cadwaladr UHB. Moreover, the most recent audit of UGI cancer activity demonstrated that many surgeons’ case loads remained small, staging strategies idiosyncratic, operative mortality was 12%, and 2 year survival following surgery was 42%. In 2007, the SEWCN implemented a working group (Board) to address these issues with the specific aim of reconfiguring and centralising services. Welsh Government funding of £300,000 was provided in support.
4. Assessment of Problem and Analysis of its Causes

(Quantified problem; staff involvement; assessment of the cause of problem; solutions/changes needed to make improvements)

Despite this history, concerns were expressed by several stakeholders in AB and CT LHBs, regarding four interlinked drivers; quality (including patient safety), workforce, cost, and access. Specialist MDT expertise has been reported sporadically to improve patient outcomes, but these hypotheses have not been tested by randomised control trials. Certainly, case volume per surgeon or unit has been reported to be an important factor determining short term treatment outcomes of several cancers, yet data regarding the survival impact of reconfigured centralised cancer surgery is thin and conflicting. Moreover, Enhanced Recovery Programmes (ERP) have also been reported to improve outcomes after major colorectal surgery, but have not been tested in the UGI arena.

5. Strategy for Change

(How the proposed change was implemented; clear client or staff group described; explain how they disseminated the results of the analysis and plans for change to the groups involved with/affected by the planned change; include a timetable for change)

The aim of this strategy for change was to determine the influence of a new model of care, comprising centralised surgery, encompassing an ERP, when compared with historical control outcomes. After a 7 year negotiation involving all stakeholders, agreement was reached to centralise services at UHW, starting August 2010. A hybrid in-reach / out-reach model was developed based on 5 UGI surgeons, dedicated theatre teams, and additional
specialist nursing staff including a new Clinical Nurse Specialist (CNS) and Surgical Care Practitioner (SCP). Diagnosis, staging and CNS support continued within each LHB, coordinated via 3 local weekly MDTs, and cases deemed suitable for curative treatment were agreed at the existing SEWCN MDT meeting. Specific reconfiguration within AB LHB and the Royal Gwent Hospital included a two-fold increased frequency of local MDT meetings, and the establishment of a dedicated UGI cancer OP clinic.

6. Measurement of Improvement (Details of how the effects of the planned changes were measured)

Details of 606 consecutive patients diagnosed with UGI cancer were collected prospectively and outcomes before (n=251), and after (n=355) centralisation compared. Primary outcome measures were rates of curative treatment intent, operative morbidity, length of hospital stay (LOS), and survival. Dates and causes of death were obtained by the Wales Cancer Intelligence and Surveillance Unit.

7. Effects of Changes (Statement of the effects of the change; how far these changes resolve the problem that triggered the work; how this improved patient/client care; the problems encountered with the process of changes or with the changes)

The rate of curative treatment intent increased from 21 to 36% following centralisation (p<0.0001). The proportion of patients recruited into portfolio national and randomised controlled trials increased from 48 to 100 (p=0.011),
and 28 to 44 (p=0.05) respectively following centralisation. Operative morbidity (mortality) and LOS before and after centralisation were 40% (2.5%) and 16 days, compared with 45% (2.2%, p=0.681) and 13 days respectively (p=0.024). Median and 1-year survival (all patients) improved from 8.7 months and 39.0%, to 10.8 months and 46.8% following centralisation respectively (p=0.032). On multivariate analysis, age (HR 1.894, 95% CI 0.743 to 4.781, p<0.0001), centralisation (HR 0.809, 95%CI 0.668 to 0.979, p=0.03), and radiological stage (HR 3.905, 95% CI 1.413 to 11.270, p<0.0001) were independently associated with survival.

8. Lessons Learnt  (Statement of lessons learnt from the work; what would be done differently next time)

The challenge for health service reconfiguration planners lies in achieving a practical balance that optimises the key elemental drivers of quality, workforce, cost and access, given the complex and diverse tradeoffs that exist. The key quality and safety issues addressed by the SE Wales reconfiguration included ready access to all specialist disciplines, compliance with clinical guidelines, access to diagnostic and staging technologies, and strong clinical governance. Costs frequently increase in association with improved quality of health care, and the surgical centre workforce was bolstered with additional specialist nursing staff to the tune of £300,000. This additional expense was mitigated by reduced critical care use, reduced
operative morbidity, and shortened lengths of hospital stay. Indeed, if the pre-centralisation cohort of patients had been treated in line with post-centralisation protocols the projected cost saving would have been in the region of £310,000. Patient access to services is crucial, and frequently the focus of the most intense political pressure during any health service reconfiguration. In SE Wales the new service resulted in longer distances of travel to hospital for a proportion of patients, specifically 17 patients from CT LHB, and 23 from AB LHB. Of these, 11 (27.5%) cited access difficulties (5 from AB, and 6 from CT). A key question that arises is the underlying reasons for the improved outcomes witnessed. The probable answer lies in a combination of small incremental but allied service improvements, such as the increased frequency of local MDT meetings, increased caseload, single centre team surgery, allied to the benefits associated with an ERP.

9. **Message for Others** *(Statement of the main message they would like to convey to others, based on the experience described)*

NHS UGI cancer service configuration remains controversial and opinion polarised. The principal findings of this study were that a centralised clinical model including an ERP was introduced safely and effectively. The curative to palliative treatment ratio increased by 71%, the proportion of patients recruited to portfolio national clinical trials doubled, ITU cancellation rates fell 7 fold, operative morbidity fell 50%, lengths of hospital stay reduced on average by 3 days, median survival improved by 20% and overall one year survival improved by nearly 8 percentage points. Further long term follow up is desirable and necessary to appreciate the full spectrum and magnitude of the patient safety, quality, and survival improvements achievable by
reconfiguring regional UGI cancer services and compliance with IOG guidance.