AUDIT

The Use of Clinical Audit During a Successful Medical Engagement in Afghanistan

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Abstract

Objectives: To describe a successful medical engagement during counter-insurgency operations in Afghanistan, and to demonstrate that a full audit cycle can be used in this environment to support improvements to local healthcare delivery.

Methods: In the district of Nad-e-Ali, Helmand Province, Afghanistan, the management of children under five years of age (under-5s) who presented with diarrhoea to a Ministry of Public Health (MoPH) Basic Health Centre was audited. Staff then attended a training course on the Integrated Management of Childhood Illnesses (IMCI) in Kandahar. After further medical engagement to reinforce this training, the audit was repeated.

Results: A lack of knowledge of the Afghan government's MoPH guidelines during the initial audit resulted in 90% of under-5s with acute diarrhoea being given unnecessary antibiotics and none receiving zinc as recommended. Following the training course and on-going engagement, there was a 67% reduction in the number of under-5s prescribed antibiotics and a 74% increase in the number who received zinc.

Conclusions: Opportunities for successful medical engagement during operations are limited but this example demonstrates that in conjunction with host nation facilities, sustainable improvements in healthcare are possible. Secondly, it shows that use of the audit cycle can provide objective evidence that may help encourage local staff to improve their standards of patient care.

Introduction

During counter-insurgency operations, military medical personnel frequently engage with local health services. As a minimum, responsibility for the management of civilian casualties must be agreed and it may fall to international forces to provide emergency care. During conflicts, strict rules of eligibility are created to guide the extent of this involvement. These are based on the resources available, the Geneva Convention and medical ethics. Despite this, military units are often keen to provide additional medical care to the local population in order to win their consent. Growing evidence suggests that this process, often termed 'MEDCAP' (Medical Civil Aid Programmes), has little effect in the long term [1]. Medical engagement should promote and develop local healthcare services that are sustainable, without creating dependence or raising expectations within the community. Such opportunities are often extremely limited for combat units, particularly for the British military, where short operational tour lengths make viable interventions more difficult.

Engaging with host nation health services during military operations will raise ethical and security dilemmas that place restrictions on the ability of military medical professionals to produce sustainable and meaningful change. This is particularly true in the later stages of a campaign when mission focus shifts towards transition of responsibility from international to indigenous security forces. There is recognition that at a district and provincial level, co-ordination and co-operation should take place with the health sector early in a campaign and during the formulation and development of stabilisation plans [1]. Alongside security and governance, it is equally important to ensure that a country takes on responsibility for the on-going provision of effective health services. At a more local level, the effect of engagement is less clearly defined. Actions that produce significant advances in one local area may be detrimental in another. As an example, in Afghanistan, in areas where insurgents still maintain an influence, any association with International Security Assistance Forces (ISAF), however small, may lead to intimidation and violent reprisals. A single visit to a health centre, which may seem harmless on its own, can deter local nationals from attending for fear of their safety. Repeated visits could quickly create a perception that international security forces are linked with the facility and cause it to become a target for insurgent attacks. To mitigate this risk, an alternative location could be used for engagement. A shura area inside the safety of a patrol base provides both security during the meeting and avoids an obvious link being made between ISAF and the local health facility.

In Afghanistan, the Ministry of Public Health (MoPH) uses a basic package of health services to ensure that the most important and effective health interventions are made available to all Afghans. This package is implemented with support from a large number of organisations including their donor, the World Bank and the USAID sponsored BASICS (Basic Support for Institutionalizing Child Survival). Since it began in 2003, there has been huge progress and 85% of the population now have access to basic health services[2]. In the south of the country however, where security remains poor, access is often restricted and the quality of care provided is extremely variable. In the district of Nad-e-Ali in Helmand Province, ISAF have been assisting the Government of the Islamic Republic of Afghanistan (GIRoA) to establish a secure and stable environment for reconstruction and development. Improved security has allowed ISAF to place greater focus on alternative efforts, such as education and health, through

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close co-operation with GIRoA and associated non-governmental organisations (NGOs).

Whilst deployed on Operation HERRICK 14 (March – September 11) in a patrol base in the south of the district of Nad-e-Ali, staff from the local basic health centre (BHC) approached ISAF asking for help to improve their medical facility. Healthcare in the region is contracted to the Afghanistan Centre for Training and Development (ACTD), who are responsible for employing and training staff within health centres. Figures 1 and 2 show the relatively new building that housed the clinic staffed by a doctor, nurse and vaccinator who were all male and a female vaccinator. The doctor had qualified in Pakistan 27 years ago with no post-graduate training or examinations and it was unclear exactly what medical qualifications the other staff had. During further engagement it was observed by the author that simple MoPH guidelines were neither followed nor completely understood.

Figure 1. Basic Health Centre

Figure 2. Basic Health Centre consultation Room

Throughout April and May 2011, a quarter of outpatient consultations at the BHC were for children under 5 years of age (under-5s) and almost 50% of them presented with diarrhoea (data from author's unpublished medical engagement report). Diarrhoea is the second leading cause of mortality among under-5s globally and it is responsible for an estimated 1.5 million worldwide deaths each year [3]. Within Afghanistan it is estimated that diarrhoeal diseases are responsible for 22% of the national under-five mortality rate [4]. The World Health Organisation (WHO) and UNICEF (United Nations International Children's Emergency Fund) have published simple evidence-based guidelines for the management of diarrhoea in under-5s [5]. These guidelines have been included in the Integrated Management of Childhood Illnesses (IMCI) and have been adapted for use in Afghanistan in a National Action Plan by the MoPH [4]. As the BHC staff were unaware that these guidelines existed, their implementation became the focus of the engagement.

Health is normally co-ordinated by line ministry officials, in this case, the District Health Officer (DHO). In Nad-e-Ali, there were regular meetings between ISAF and the DHO to discuss on-going medical engagement work in order to avoid undermining his authority and responsibilities. As service provision in Afghanistan is often subcontracted, healthcare staff may not actually be aware that the DHO can help them to improve their facility. Encouraging them to work with the DHO will also help to develop local governance. This report describes a successful medical engagement in Nad-e-Ali where a complete audit cycle was used in conjunction with education in an attempt to make a sustainable improvement to the quality of healthcare delivery.

Method

Throughout the engagement, keeping an ISAF presence at the BHC to a bare minimum was a priority; staff therefore attended the patrol base for the majority of the shuras (meetings). An initial retrospective audit was conducted over a one-month period (21 April – 20 May 2011) using data from the BHC patient registration book. For each consultation, a patient's age, their diagnosis and the treatment given were routinely recorded in the book in English. This negated the need to use local interpreters and meant no patient identifiable information was collected. In-theatre audit approval was obtained prior to commencement of the project. Data were recorded in a Microsoft Excel database. The IMCI guidelines differentiate between dysentery (bloody diarrhoea), cholera and acute watery diarrhoea. BHC staff were already able to differentiate between these diagnoses and the audit therefore only included cases of acute watery diarrhoea in under-5s. Children with a diagnosis of dysentery and cholera were excluded. Audit standards (Table 1) were adapted from the IMCI guidelines and the MoPH National Action Plan.

100% of children under five with acute diarrhoea should not be treated with antibiotics
100% of children under five with acute diarrhoea should be given oral rehydration salts
100% of children under five with acute diarrhoea should be given zinc

Table 1. Audit Standards (adapted from MoPH National Action Plan [4]).

The results were presented to the BHC staff and used to highlight the difference between their current management of diarrhoea in the under-5s and that recommended by the MoPH IMCI guidelines. Two weeks after the initial audit, one of the BHC staff members attended an 11-day IMCI course in Kandahar, Afghanistan. This training course forms a routine part of the MoPH's basic package of health services. Several educational shuras followed, during which the guidelines on the management

of diarrhoea in under-5s were reinforced and staff concerns about their implementation were explored. Zinc was not stocked in the BHC at the time of the first audit and therefore no patients were treated with it.

The audit cycle was completed using data collected retrospectively over a representative two-week period (14 – 31 July 2011) using the same methods as before.

Results

Initial Audit

During the initial audit period, there were 533 consultations with an average of 21 consultations per day. One hundred and forty two (27%) of these consultations were in under-5s age group. Sixty three of this cohort of 142 (44%) under-5s presented with acute diarrhoea of which 57/63 (90%) were given unnecessary antibiotics; oral rehydration salts (ORS) were prescribed during 58/63 (92%) of consultations.

Repeat Audit

During the repeat audit period, there were a total of 331 consultations, representing an average of 22 per day. The under-5s accounted for a similar percentage of these as in the initial audit (85/331, 26%). Acute diarrhoea was the presenting condition in 39/85 (46%) of consultations. This time, 9/39 (23%) of patients received antibiotics unnecessarily, ORS were given to 37/39 (95%) of patients and 29/39 (74%) were treated with zinc.

Figure 3 compares the results from both audits. It illustrates that standards improved after staff had completed their training course. There was a 67% decrease in the number of under-5s inappropriately treated with antibiotics and a 3% increase in the number of children given ORS. Following a request for zinc from their head office, a supply was received and there was a 74% improvement in the number of children treated with zinc.

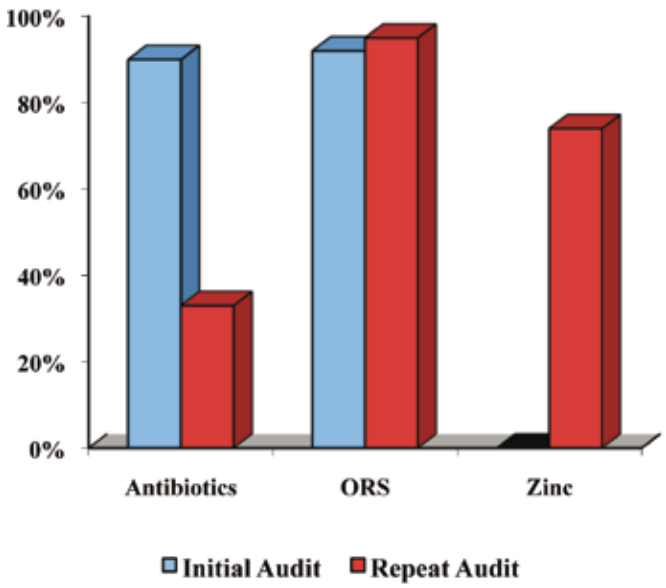

Figure 3. Comparison of the initial and repeat audits reveals improved standards across all three criteria. ORS (Oral Rehydration Salts).

Discussion

Inappropriate antibiotic prescription for the management of diarrhoea remains a problem worldwide [7, 8]. In resource-limited settings, where access to more expensive, alternative antibiotics is often limited drug resistance due to antibiotic overuse is a growing concern [9]. Reasons for this include both patient expectations and the public's lack of knowledge about the appropriate use of antibiotics. It can be challenging to change attitudes such as these, especially when there are few personal incentives to do so. Despite an 11-day training course, medical staff at the BHC were initially reticent to change the way they practiced. The medical engagement encouraged them to follow national guidelines and improve the standard of care for their patients.

Zinc supplements given to children in developing countries during and after an acute episode of diarrhoea both reduces the length and severity of the episode and lowers the incidence of diarrhoea in the following three months [10, 11]. This evidence led to an update in the WHO IMCI guidelines in 2005 [12]. In 2008, the MoPH produced a national action plan to improve the management of cases of diarrhoea. The intended result of the plan was to institutionalise zinc supplementation and secure a regular supply of zinc [4]. Despite this, in 2011, the BHC still held no zinc tablets. The temptation to fill this gap by providing a supply from ISAF was resisted and BHC staff were encouraged to contact their employers to ask for stock. Not only did patients begin to benefit within a few weeks of the shortage being identified, but by using the BHC supply chain the source was more sustainable. One of the MoPH's National Action Plan monitoring indicators is the percentage of diarrhoea cases prescribed zinc supplementation with a target set in 2010 of 100% (35% in 2009) [4]. Although falling short of the 100% standard, given that zinc had only been available for a short period of time, it is fair to allow more time for the BHC to improve.

Fragile and intermittent supply chains will often leave facilities short of medication. Although tempting, offers should not be made to fill gaps, even in the short term. This will only serve to create dependence and prevent the development of robust supply routes. The MOPH basic package of health services provides clear guidance on the stock that should be held in each health facility [13]. If something is missing, local staff should be encouraged to request it. Although military units will often hand out small gifts in order to win the consent of a local population, this is discouraged during medical engagement events due to their limited, short-term effect. It could even lead to dissatisfaction with a populations' own health facilities as they are unable to provide similar free gifts.

During the first audit, no under-5s were documented with a diagnosis of dysentery (bloody stools) yet in the second audit there were five. This may have been due to an increase in the number of patients presenting to the clinic with dysentery but may also have been an improvement in the accuracy of the documentation. The increased scrutiny of the registration book during this period, may therefore have led to a recording bias in the results. It is recognised that there are other limitations to this short period of medical engagement. Entries in the BHC patient registration book were handwritten and often difficult to read. Although the data were collected with the BHC staff helping, some results may have been recorded incorrectly. The audit results demonstrate a positive change in practice but further assessment is required at a later date to ensure that standards continue to improve and to monitor the long-term success of this initiative. In an ideal world, the audit would be repeated on an annual basis. However, although the process was explained to the BHC staff, it was not understood to the extent that would allow them to use it as a tool to monitor their progress without further support and training.

Conclusion

This report describes both a short medical engagement and a complete audit cycle during an operational tour in Afghanistan. Priority during the initiative was given to ensuring a sustainable change that improved the quality of healthcare delivery and had minimal detrimental effect on either local health facilities or health governance. The audit was used successfully to encourage medical staff to follow their national guidelines. Although opportunities for successful medical engagement are often limited during current ISAF counter-insurgency operations in Afghanistan, they still exist. Deploying medical staff should have a basic knowledge of the multiple factors that could influence their interactions with the host nation's health care system in order to allow effective preparation and planning.

Educational Points

- Audit is a simple tool and its use should be encouraged both in the UK and on deployed operations.
- Although medical engagement can be challenging, opportunities do exist. These must be recognised and then acted upon to produce sustainable improvements.
- In order to prevent well intentioned medical engagement having a negative effect, medical staff should be aware of the multiple factors that can influence outcomes before planning takes place.

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Notes