

Infection prevention and control through a VISION 2020 LINK between Mombasa and Southampton

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The authors share how a partnership between Mombasa and Southampton has enabled Kenyan healthcare professionals from four institutions to innovate and work as a group to improve infection prevention and control.

Infection prevention and control (IPC) is a cornerstone of all healthcare practice. IPC can help to prevent the spread of infectious diseases and improve healthcare outcomes for all patients.

During 2012, the VISION 2020 LINKS Programme helped to develop a strong working partnership between University Hospital Southampton and four forward-thinking eye hospitals in Mombasa, Kenya. The Coast Ophthalmology Caucus describes the group, which consists of four separate eye units – Lighthouse for Christ Eye Centre, Kwale District Eye Centre, Coast Provincial General Hospital and Lions Eye and Blood Centre.

The key catalyst to this project and a component of its success was the receipt of a grant from the Department for International Development (DFID), administered by the Tropical Health & Education Trust (THET). With further support from the VISION 2020 LINKS Programme throughout, each institution played a vital role in the success of the project.

Infection prevention and control in four eye units in Mombasa

From the outset, each hospital had a clear understanding of their individual needs to improve the safety and care of their patients in relation to IPC. In conjunction with the Kenyan teams, a project was planned that would empower each hospital to develop

their own services further, with support from their Southampton LINK partner.

The scale of this project cannot be underestimated. Over 50,000 patients per year attend the four eye hospitals in the Coast Caucus area. We hoped the project would have wide-reaching benefits for a large number of patients. Three of the units – Lighthouse, Lions and Kwale – are run using charitable donations and have a private patient service, which supports the charitable arm of their hospitals as they provide free eye care for patients who are unable to contribute financially. Coast Hospital is government-run and provides a wide range of services to the community.

To begin this process each of the hospital leaders - Dr Ibrahim Matende (Lighthouse), Dr Vishwanatha Gokhale (Lions), Dr Helen Roberts (Kwale) and Dr Victor Njom (Coast) - selected an IPC leader to represent each hospital.

First training visit to Southampton

The four selected lead nurses visited Southampton in May 2016 for two weeks. During their time in Southampton, they developed IPC protocols for use in their home eye units. On their return to Mombasa each had six protocols prepared and ready for implementation. In addition to the preparation of guidelines, change management strategies were discussed to support the implementation of these new protocols. The aim was to develop common

IPC protocols across the four eye units that would lead to a streamlined approach across the region.

Implementing the training on return to Mombasa

On their return to their hospitals, the nurses needed to gain the support of the ophthalmologists and senior managers, then promote the new guidelines and get the buy-in of the staff who would be implementing them. A training visit to Mombasa was planned by the team from Southampton for September. By then, the four lead nurses would have started to implement the guidelines. The visit would enable the Southampton team to understand the challenges the Kenyan teams faced and the extent of their progress. This would enable the Southampton team to give further support as necessary.

First UK team visit to Mombasa

A huge amount of wonderful work had taken place following the introduction of the guidelines. With minimal resources, the Mombasa nurses had been able to implement changes. All four units had hand hygiene facilities with a standardised way of disposing of sharps. The four nurses had empowered their staff as well as reached upwards to the heads of the relevant hospitals to stress the importance of infection prevention. As soon as this information had reached the heads, the lead nurses had received fantastic support in each hospital to enable their success.

Key activities during the training visit

During the September visit, the aim was to create shared leadership around IPC

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and empower as many staff as possible. We encouraged all staff members, from cleaners to consultants, to attend hospital-wide lectures. The key themes running through each presentation were:

- Infection prevention and control is everyone's responsibility.
- Empower the patients to become part of infection prevention.
- Use appropriate and relevant examples of how infection can spread.

It was important to show all staff about the transmission of bacteria and reiterate key points, which they could pass on, not just within the hospital, but at home and in the local community.

The visit was an insight into Kenyan culture. A formal handshake is a big part of Kenyan culture, which can lead to the spread of bacteria. Therefore, we had to adapt our approach to encourage staff to break the chain of potential infection before and after this cultural norm. The feedback we received from the Kenyan hospitals was excellent; the practical demonstrations on bacteria transmission were very well received and encouraged critical debate regarding hand hygiene.

The Kenyan partners seemed re-invigorated in their quest to improve infection prevention. One lead nurse commented on the visit: "The presentations made during the visit brought much sense and meaning to staff whom we had a challenge to change their attitude, even after a series of teachings with us trying to impart the knowledge we had acquired from Southampton."

Helping our Kenyan partners to tackle problems

Although changing attitudes was one of the challenges the team encountered, the biggest challenge was the limited resources in some of the hospitals. The Kenyan team highlighted that they had difficulties sourcing materials and sometimes supply was variable. The lead nurses had established bi-monthly infection prevention meetings between all the eye hospitals in Mombasa, to foster collaboration. They had linked up as a group of hospitals to find reliable suppliers for infection prevention equipment. What was also striking was that a number of the hospitals had developed partnership agreements to segregate and dispose of sharps via incineration instead of the previous method of disposal in an open pit. This had been driven by the will and determination of the highly motivated group of lead nurses to make their hospitals safer.

As one of the UK team said: "The determination shown by the nurses to overcome some difficult challenges

has been astonishing. They have shown excellent resourcefulness to ensure that this project has blossomed into change on the ground."

Final UK team visit to Mombasa

In February 2017 the Southampton team made a review visit to Mombasa to see how the training in Southampton in May and in Mombasa in September had been embedded.

The first visit was to Lighthouse, which is a Christian-run eye hospital that aims to give the best possible care to all patients in its facility in Mombasa and at various free eye camps in the surrounding rural areas. The Eye Centre is a modern clinic and surgical centre that sees over 25,000 patients and performs over 2000 eye surgeries annually. Its Medical Director is Dr Ibrahim Matende, who is passionate about improving services.

We were shown hand-gel dispensers throughout the hospital, signs explaining how to perform handwashing, and posters explaining how to manage waste segregation, along with bins showing the different coloured bags folded visibly over the edges, to aid correct identification.

At Coast General Hospital the LINK Nurse, Truphosa Imali, has been a powerhouse of enthusiasm and energy on this project, not only taking it into her own department (ophthalmology), but rolling it out into other departments. On arrival, Truphosa showed us around, including the wards and a diabetes clinic session, where she pointed out the hand gels and hand-washing stations in place, as well as the sharps bins and other waste segregation bins displayed clearly. She laughed as she told us that she was modelling her wards on the ones at Southampton – covered with information posters.

The Lions Eye and Blood Centre's mission is to provide excellent clinical care for all, and this hospital has shown a great deal of dedication and progress since the start of the project, with Elly Odigo and George Binns receiving fantastic support from Dr Gokhale, the lead clinician.

Kwale Eye Centre is the only institution outside Mombasa centre – in Kwale district, south of the city. The institution was founded by Dr Helen Roberts, an English ophthalmologist who has made this her life's work. The ethos centres on preventing avoidable blindness.

The Southampton team was warmly received by VISION 2020 LINK Nurse, George Munywoki. The team was shown around the clinic and wards, and learnt that all the funding is from charitable donations, though patients are encouraged to pay a fee if they can.

Impact beyond ophthalmology – across the hospitals

The most significant result is the reach of this project. The aim was to improve IPC guidelines within ophthalmology but the nurses have expanded this reach way beyond the original remit. The most notable example of this is in Coast, which has applied the principles to the whole hospital, thanks to the determination of Truphosa in driving the project. An IPC committee has been established, with each Department having a head of IPC to embed training beyond ophthalmology. Coast and Lions Hospitals have introduced new uniforms to comply with 'bare below the elbows' as part of the hand hygiene guideline. These uniforms also meet religious dress requirements.

Benefits to the UK team

The relationship between the UK team and the four Kenyan nurses was fantastic. A virtual support network has been developed by the UK team to support the Kenyan LINK nurses so they can access advice easily and to ensure this project has longevity. There has been lots of bilateral learning. In the NHS, most items are single-use and there is access to a wealth of facilities. Seeing how the Kenyan teams use resourcefulness, problem solving and a 'can-do' attitude to get around some of the difficulties they face was eye-opening and led to some reflective practice about simplification of services and the importance of team dynamics.

Lizzi Lewis, from University Hospital Southampton Eye Department, said: "It's so wonderful to know how much of a difference this project has made. I am in awe of the determination and innovation of the teams in Kenya, who have pushed so hard for those changes and put such hard work into making them happen. It is an awesome thing to see, and to know how the culture of safety and wellbeing is being improved for patients and healthcare professionals. Another wonderful aspect to the project, which I hope will bring learning and attitude change from Kenya back into the UK is the resourcefulness and willingness to work together in challenging conditions. With regard to sustainability, there has been considerable effort on the part of the LINK nurses to engage and inform other members of staff, in order that the new measures become an embedded part of hospital culture. We hope that with sustained support and input from the UK team, our Kenyan counterparts will be able to continue the process of audit and feedback."

Upon returning to the UK, the team reflected on how impressive the LINK nurses have been throughout the project.

There has been a high level of commitment from all four hospitals and excellent progress has been made. The relationships with the LINK nurses have developed from warm, professional relationships into friendships and we are delighted to have been able to learn from their passion, enthusiasm and innovation. We have all come away much enriched, and particularly galvanised by the 'can-do' attitude these amazing individuals hold, which has generated such excellent results in the embedding of infection prevention and control in hospital culture.

Summary

All four hospitals have committed to continuing to embed the guidelines into their practice and establish a hospital culture that demonstrates compliance with IPC standards. All four hospitals have shown huge enthusiasm, effort and innovation in order to manage this shift in culture towards

one that better supports the wellbeing of patients and healthcare professionals. The project has enabled Kenyan healthcare professionals from four institutions to innovate and work as a group to improve IPC. They have been empowered to assess their practice in new ways, which has led to positive change.

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Spotlight on Lighthouse

The LINK Lead Nurse Phenny Khandoro had wanted to follow the recommendations in the waste segregation policy, recognising that it supported safe disposal of waste. Unfortunately, supply of such items as differently coloured plastic buckets can be extremely difficult and even finding items, never mind funding them, can be challenging.

Phenny had an idea – she bought standard bins with the support of Dr Matende and paired them with coloured waste



An example of hand gel easily accessible at staff work stations (photo taken at Lighthouse).

bags, ensuring everyone knew the waste segregation policy, and to look for the edge of the bag rolled over the bin to show which one was to be used.

Spotlight on Lions

The Southampton team were all very impressed with the outreach to rural areas run by Lions. This is a weekly system for enabling sight-saving surgeries for patients from hundreds of kilometres away. Each week they fetch patients identified as needing surgery, prepare them for two days prior to surgery with iodine drops, then operate, then offer topical antibiotics, some time to recover, and then return them home. They told us this has dramatically reduced their postoperative infection rate to zero, though there is admittedly a difficulty with further follow-up, given patients are so geographically distant. However, the success rate and difference to patient safety with this system is really worth celebrating.

Elly Odigo, one of the LINK nurses, said: “The project made my brain think differently about the aspects of my job, casting a critical eye over them and realising where there is room for improvement with regard to IPC.”

Spotlight on Kwale

Kwale focused on decontamination processes in particular, developing a four-bucket method in compliance with the guidelines. They have colour-coded containers with different cleaning solutions (sodium hypochlorite (JIK) solution, plain water, soapy water, then plain water again) through which used instruments travel prior to being sterilised.

Colour-coding features in their next venture too, as they had previously struggled to manage waste segregation due to resource constraints. Having heard about the innovation at Lighthouse, via the VISION 2020 project, George said he would adopt their method of visibly curling the edges of differently-coloured plastic bags over the edges of normal bins, in order to denote which should be used for the different types of waste.

George Munywoki, Head Nurse at Kwale, said: “This project has opened my eyes on basic but usually ignored processes. It has brought a new dimension on how I view infection control and the ultimate goal is to ensure this new knowledge trickles down to safeguard our patients.”

Spotlight on Coast

Truphosa has more than just the eye unit within her grasp. She decided that the learning through the VISION 2020 project would benefit not only her own workers and patients, but those throughout the hospital. She has appointed lead nurses in charge of IPC in many of the other departments, and has her eye on the remaining ones that have yet to take on the new guidelines. She has run multiple training sessions to support the new expectations in practice, and how they will enable a culture of increased safety and wellbeing for patients and healthcare staff alike. In conjunction with Dr Njom she has helped to set up a hospital-wide infection prevention committee.

Inspired by the training, Truphosa developed a vision “to put infection prevention at the centre of everything we do across

the whole hospital.” By selling this to the key leaders in her hospital she has begun to implement the learning via presentations, positive conversations, empowering team members and practical assessments. She is currently seeking a protégé to take over when she retires.

“Teamwork is the key subject to all these achievements. The Southampton team has always been there for us.”



Five Moments for Hand Hygiene poster displayed throughout the hospitals (photo taken at Coast).



The Mombasa and Southampton teams at the Lions Eye and Blood Centre.



Bucket system for cleaning and decontaminating equipment before sterilisation (photo taken at Kwale).

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