The ‘gloves are off' – can we reduce inappropriate glove usage through an educational based intervention and risk assessment?

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BACKGROUND

Non-sterile examination gloves are required to protect healthcare workers against blood and bodily fluids (Loveday et al, 2014). Gloves that are worn to protect the patient should be sterile as non-sterile disposable gloves have been shown to be contaminated with a range of bacteria (Berthelot et al, 2006).

The recent update of the RCN Standards for Infusion Therapy (2016) advised that non-sterile gloves should not be routinely worn for the preparation and administration of intravenous medication. Furthermore, audits completed at Great Ormond Street Hospital (GOSH) demonstrated that the overuse of non-sterile gloves was a key reason for lack of adherence with the 5 moments of hand hygiene. Gloves were also being worn for the preparation of all intravenous medications. Not only was the excess use of gloves a potential vector for cross transmission of healthcare associated infections , but it is also a waste of resources (Wilson, Loveday, 2017).

THE PROJECT AT GOSH

Project Aims:

- For staff to risk assess when they wear gloves and aprons.
- To reduce hospital acquired infections and maintain/reduce our CVL infection rate.
- To improve hand hygiene compliance.
- To reduce the level of dermatitis in staff due to the overuse of gloves.
- To improve our environmental impact.
- To update our Intravenous practice.

MATERIALS AND METHODS

A working group with healthcare staff from across the organisation was set up to ensure that the project addressed all areas of practice improvement. This also ensured that all staff were given a chance to discuss the project and input into the plan of work. Consent for the project was gained via the Infection Prevention Control Committee and Trust Nursing Board, at which point we were asked to add in the additional measure of plastic wastage.

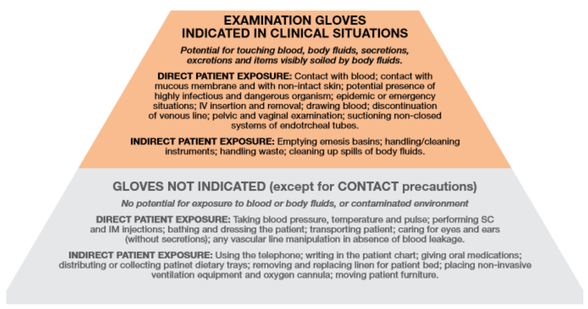
The Lead Practice Educators in conjunction with the IPC team within GOSH worked together to create an educational awareness programme for staff. This included an updated educational package as to when gloves should be worn in general practice as well as providing a risk assessment strategy for when to use gloves for preparing IV medication.

We asked staff to risk assess when they would wear gloves for giving medication . In summary gloves were only needed for:

- Any medication where you could be in contact with a bodily fluid. E.g. eye drops, nose drops
- Any therapeutically active cream
- Any liquid hormones or cytotoxic medications

In addition:

- We also asked to staff to risk assess if they were going to come into contact with blood or bodily fluid and only wear gloves if they risk assessed that this was certain or highly likely using the WHO assessment triangle.



The Education team, IPC team and IPC link nurses then disseminated this training across the trust, including to other members of the MDT such as the porters.

With the help of procurement and the quality and safety teams data has been collected for hand hygiene audits, infection rates, soap and hand sanitiser usage, glove usage, bung usage, dermatitis levels in staff, qualitative data from patients and families surrounding glove usage and financial and environmental measurements at baseline and is on-going.

RESULTS

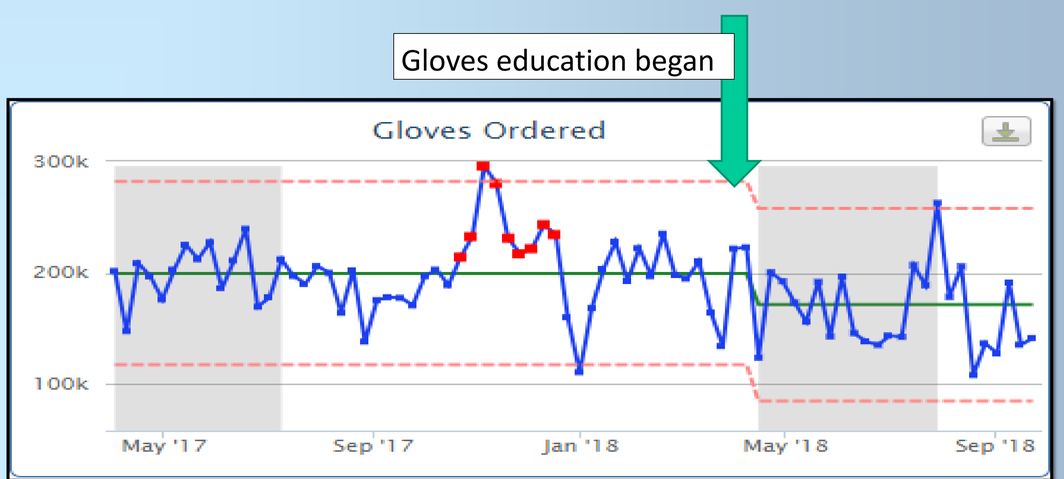
After six months the initial results are very promising. We have seen a mean average reduction of 36,608 gloves per week; if extrapolated over a year this would mean that the actions of staff have resulted in the Trust being responsible for 9516kg (9 ½ tonnes) less plastic being manufactured and disposed of every year. That’s the weight of 2 fully laden ambulances. The carbon footprint to produce this plastic is approx. 57,096kg (57 tonnes) of the climate change inducing gas Co2 not to mention the energy involved in safely disposing of it.

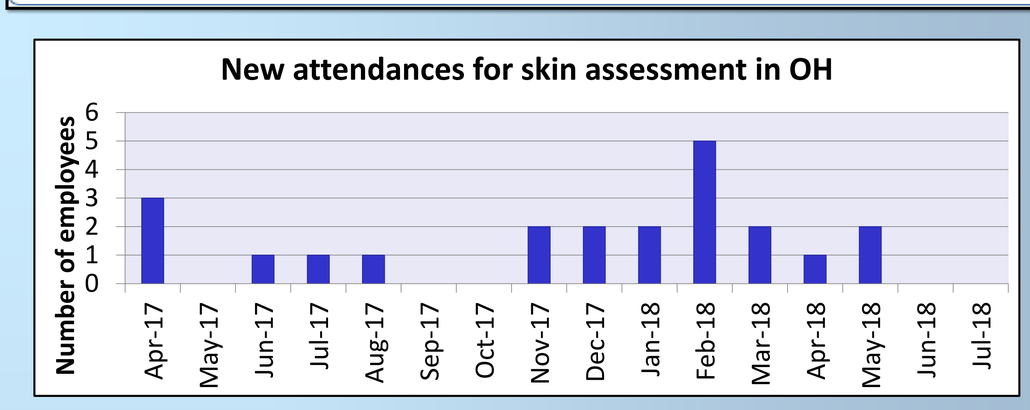
Although we are waiting for further data it would appear that the peaks in ordering of gloves would also match outbreaks in infection and thus that the clinical staff are making the correct risk assessment and using more gloves when they need to.

We have seen no marked increase (with zero attendance) in new reports for skin assessment, we will continue to monitor over the coming months.

CVL infection rate remains within normal parameters

There has been no adverse rise associated with glove use in hospital acquired infections including VRE and viral respiratory and enteric infections.





CONCLUSIONS

The initial findings from this project are very promising and demonstrate that changes in clinical culture and practice are possible through the combined team work of education and infection control.

The results show that through education and empowerment teams can make a change that positively affects infection control compliance as well as procurement and environmental factors.

It is hoped that with further data analysis of year on year infection rates, this project will be transferable to other hospital settings.

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