1. Introduction

- In February 2016 there was a major outbreak of Norovirus.
- This outbreak is compared to two previous major outbreaks in the same hospital in 2015 and 2010.
- Prior to this, over the last 10 years the hospital has experienced regular outbreaks of Norovirus.
- What could be learnt from these major outbreaks and are we doing anything differently?

2. Background

- In the four weeks between 01/5/2016 and 29/5/2016 the Hospital Norovirus outbreak peaked on the 28.3.16 which fell to under 7 by 10/4/16.
- By the 10/4/16 the epidemic curve had reduced and there were under 10 suspected or confirmed Norovirus outbreaks daily.
- The first outbreak was identified on the 9th February and continued over a period of 6-7 weeks until around the 3-4th April 2016.
- There was a peak of 29 Norovirus positive inpatients on the 28.3.16 which fell to under 7 by 10/4/16.
- By the 10/4/16 the epidemic curve had reduced and there were under 10 symptomatic patients reported.
- There were 12 outbreak meetings held with HPU invited.
- After the 10/4/16 the ICNs advised 2 further wards to close in response to new Norovirus positive results (including a ward with dementia patients).
- Between 4-6th May there was a steep upsurge of cases, the ICN’s signing out of the outbreak and use of action cards.
- At the highest outbreak peak on the 10/5/16, there were seven wards and a further eight bays closed with at least 35 confirmed Norovirus inpatients (25 wards in total on site).
- It remains unclear as to whether there was one outbreak with 2 peaks or 2 separate outbreaks?
- While in 2010 the hospital was closed to patients including the ED department; in 2015 and 2010.
- Delay in obtaining Norovirus results.
- Specimens not being collected and sent promptly to laboratory for testing.
- Low hand hygiene scores in some wards.
- High numbers of staff not cleaning hands before donning gloves.
- Some commode staining.
- Not enough patient care equipment on wards to segregate equipment for affected patients.

3. Actions

- Norovirus winter preparedness forms launched to Divisions before outbreak commenced.
- The updated outbreak response plan was implemented stating the level of preparedness before any cases arrive.
- Norovirus action plan implemented with timescales.
- Hospital closed to visitors on 2 occasions.
- Norovirus samples (stool & vomit) sent to other hospital site for PCR testing daily.
- Agreed that rectal swabs could be sent as well as stool specimens.
- At least daily ICN ward rounds to all closed wards and affected bays.
- Daily hand hygiene audits on closed wards.
- Mobile handwash sinks put at entrance of all closed wards.
- New permanent handwash basins to be plumbed into entrance of all wards.
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- Norovirus poster signs displayed at all entrances to hospital and car park.
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- Site Management & Infection Control working closely together.
- Contingency plans and action cards.
- Ventilation systems inspected.
- Staff infection control training.
- No single common route identified.
- Low hand hygiene scores in some wards.
- High numbers of staff not cleaning hands before donning gloves.
- Some commode staining.
- Not enough patient care equipment on wards to segregate equipment for affected patients.

4. Challenges

- New permanent handwash basins to be plumbed into entrance of all wards.
- There were none reported in 2016 at the end of outbreak.
- There were seven wards and a further eight bays closed with at least 35 confirmed Norovirus inpatients (25 wards in total on site).
- Delay in obtaining Norovirus results.
- Continual admission of presumed ‘community acquired’ cases seemed to cause elongation of first peak.
- Majority of wards affected that have no separate entrances and exits and share waste rooms, kitchens and other facilities.
- Pressure of managing outbreak, resources, time, prolonged working, team exhaustion.
- In spite of higher numbers of Norovirus positive patients in May 2016 during second peak, hospital transmission decreased quickly.
- Were there 2 peaks or two outbreaks?
- Will sending the Norovirus isolates for sequencing help?
- Low hand hygiene scores in some wards.
- High numbers of staff not cleaning hands before donning gloves.
- Some commode staining.
- Not enough patient care equipment on wards to segregate equipment for affected patients.

5. Discussion / Way Forward

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6. References

- PHE National Norovirus and Rotavirus Report Summary of surveillance 01 June 2016 – reporting weeks 18-21