



Sharing lessons learned from a CPE outbreak UL Hospitals
Barbara Slevin, Group ADON IPC

2017
 @SPC2016Cork

#bugsndrugs

What will I talk about today?

- Overview
- Background UL Hospitals experience
- Quality Improvement measures
- Ongoing challenges
- Lessons learned, patient experience
- Where are we now and where to next?
- Conclusion



Twitter: @SPC2016Cork Safe Patient Care Conference 2017 #bugsndrugs



IPC Team UL Hospitals

Acknowledgements

IPC Team UHL: Dr Nuala O'Connell & Dr. Lorraine Power, Consultant Microbiologists, UL Hospitals
 Alan O'Searman, Eimear O'Donovan, Marion Commene, Sarah Kennedy, Eleanor Mc Carthy,
 Siobhan Barrett, Antimicrobial Pharmacist, James Powell, Regina Monahan, Surveillance Scientists

Hospital Executive UL Hospitals
 Dr Ciara O Connor, Microbiology SPR
 Patricia Treacy Financial Operations Officer
 Prof Colum Dunne, Graduate Entry Medical School, University of Limerick

Twitter: @SPC2016Cork Safe Patient Care Conference 2017 #bugsndrugs



Overview

Activity Levels

July 2009 reconfiguration of services in the Mid West Region: surgical services transferred to UHL.

Activity levels:

ED attendances approx 65,000 per annum

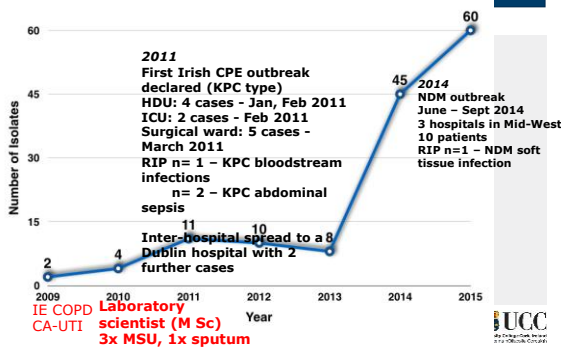
To date there were 209+ CPE patients identified in our lab, confirmed by the National Reference Laboratory data up to Sept 1st.

Hospital	Inpatient Discharges	Hospital	Day Cases
Croom	1,750	Croom	3,107
Ennis	4,500	Ennis	6,731
Nenagh	2,412	Nenagh	7,637
St. John's Hospital Limerick	5,086	St. John's Hospital Limerick	5,209
University Hospital Limerick	28,969	University Hospital Limerick	33,426
University Maternity Hospital Limerick	7,507	University Maternity Hospital Limerick	100
UL Hospital Group	50,224	UL Hospital Group	56,210

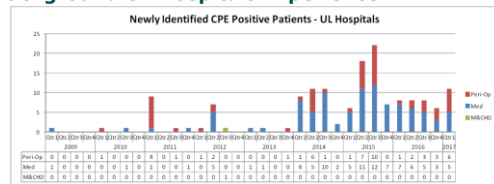
Hospital	ALOS YTD Dec 2016 excl. > 30 days
Croom	4.9 days
Ennis	4.0 days
Nenagh	5.5 days
St. John's Hospital Limerick	4.5 days
University Hospital Limerick	4.5 days
University Maternity Hospital Limerick	3.8 days



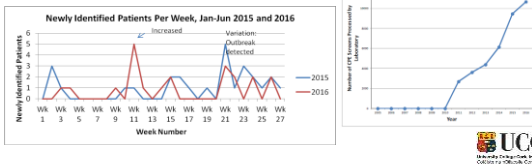
Total number of CPE isolates (n=140) – only one (the first positive) CPE clinical isolate per patient
February 2009 – December 2015



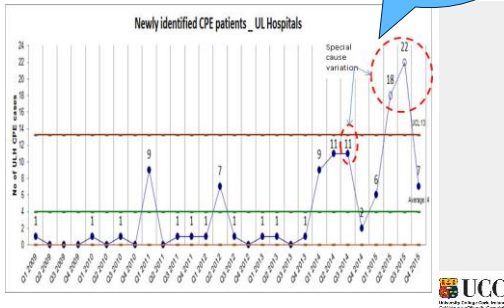
Background UL Hospitals Experience



There were no cases of CPE bacteraemia detected in Q1 2017. The last previous CPE bacteraemia was detected in June 2015.



The avoidable economic cost of this group is €4,020,148 pa (approx. 2014 estimates) or 650 bed nights



Quality Improvement Measures

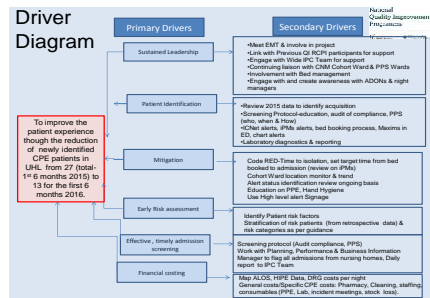
- UHL opened a dedicated infection control cohort ward on November 16th 2015.
- High levels of CPE in UHL site, placing a burden on isolation facilities and the general operation of the hospital.
- 27 cases 1st 6 months in 2015, 33 in 2nd 6 months 2015.
- Plan to reduce the clinical impact of CPE in UHL
- Plan to reduce the burden of healthcare associated infection in UHL through the provision of a ward which espouses excellent practice, standards and complies with IPC guidance
- Conduct costing exercise on management of 27 cases in 2015 and compare with case burden for 2016.

Twitter: @SPC2016Cork

Safe Patient Care Conference 2017 #bugndrugs



Quality Improvement Measures



Twitter: @SPC2016Cork

Safe Patient Care Conference 2017 #bugndrugs



Quality Improvement Measures



- PDSA --: Improve CPE screening compliance
- PDSA - Improve compliance with care bundles for invasive devices
- PDSA - Improve compliance with basic infection control
- PDSA cycle: Review rapid laboratory detection- study direct PCR detection of CPE from rectal swabs

Twitter: @SPC2016Cork

Safe Patient Care Conference 2017 #bugndrugs



Patient stories



*"Tell me a fact and I'll learn.
Tell me the truth and I'll believe.
But tell me a STORY and it will live in my heart forever"*

Indian proverb



Patient stories

"I don't know where the infection came from...nobody spoke to me...my daughter told me."

"Put a big burden on my mother... We had to adapt the house to take him home, it caused a lot of stress when the community hospital wouldn't take him"

"I felt as if I was perceived as a nuisance despite being a member of staff. Some staff were afraid to come into my room... they handed stuff in."

"The nurses are all so lovely here, just like home from home"

"What did we have to do when he came home, small children, that human touch, afraid to touch him, did we need gloves?"

"My father was treated like a pariah"

"I got a leaflet, just handed it, read that a few times... it didn't make sense to me"

"Shoved into a room, everybody passing by, you'd swear there was something really wrong with me" treated like a leper"

"Everything was so much better on the cubot ward - they cared more attention... thorough cleaning, felt safer... everyone wore gowns... hand hygiene. Not like the other ward, good standards here."



Patient stories

"The staff all gown up & wash their hands - all the time"

"I'm afraid for my grandchildren... what do we need to do... I worry about them... I'll get over what I have"

"It's the way people look at you, you feel they're moving away"

"I couldn't fault the staff on this floor, the cleaning is excellent"

"I know I'll have to be in a room on my own"

"My consultant said... you'll get a room every time you come in"

"I didn't know it lasted... I thought it would be gone when the diarrhoea stops" "It's a bug in the gut"



Where are we now and where to next?

- CPE management (cases & contacts) *alone* impacts greatly on the IPC service delivery on a daily basis
- Ongoing maintenance of known positive CPE patients:
- Average of 4 CPE in-patients per day UHL, max =8
- 3 attendances per week ED
- Outpatient/Radiology/Day Services/Dialysis
- 32 new CPE patients identified in 2017 to date
- IPC education tools for patients -simple language
- Work with PALS/Comms literacy levels/understanding
- 96 single room block-approval for design phase
- Resources

Twitter: @SPC2016Cork

Safe Patient Care Conference 2017 #bugndrugs



Where are we now and where to next?

- Carbapenem consumption monitoring on a monthly basis
- Admission Protocol for IPC Checks
- ICNet upgrade, unlimited licensing-access for all users across all sites to ensure that all staff are aware, Acutes and CHO Area 3
- Prioritise placement of high risk patients meeting screening criteria-locate outside Nightingale wards
- Established a process for daily patient alerts for those who meet CPE screening criteria through iPMS & check compliance with screening



Twitter: @SPC2016Cork

Safe Patient Care Conference 2017 #bugndrugs



Conclusion

- The impact of the QI measures utilised have evidenced a safer, more efficient and higher quality of care provided to the patient population with an identifiable cost saving of €682,086 for the first 6 months of 2016
- SMART -Aim was to achieve 14 cases
- 16 cases attributable to UHL = 41% reduction
- Overall reduction of 50% comparing 2015 to 2016- attributable to management of patients in dedicated cohort ward, refurbishment of ward 3D-identified "Hotspot" for CPE acquisition and cross transmission.



Twitter: @SPC2016Cork

Safe Patient Care Conference 2017 #bugndrugs