NHS Somerset Clinical Commissioning Group

Report to the NHS Somerset Clinical Commissioning Group on 27 May 2021

Title: Annual Infection Prevention and Control Report 1 April 2019 to 31 March 2020	**Enclosure F**

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Summary and Purpose of Paper

The Director of Infection Prevention and Control (DIPC) Annual Report provides a summary on infection prevention and control activities within Somerset Clinical Commissioning Group (CCG) from April 2019 to March 2020.

The report also provides assurance that high quality and safe processes and systems are in place for patients, visitors and staff to minimise the risk of infection in the Somerset population. Somerset CCG is assured that the providers are meeting expected requirements according to The Health and Social Care Act 2008 Code of Practice on the prevention and control of infections and related guidance (July 2015).

Recommendations and next steps

The Somerset CCG Board is asked to receive this report and note the content for information and support the infection prevention and control agenda. The report should be circulated and discussed as an agenda item.

Impact Assessments – key issues identified	
Equality	Somerset CCG is fully committed to the Public Sector Equality Duty as set out in the Equality Act (2010). This ensures all services commissioned are equitable and comply with the principles of 'Due regard'. We will also ensure that service providers are aware of their responsibility to patients and service users under the FREDA principles (Fairness, Respect, Equality, Dignity & Autonomy) of the Human Rights Act 1998.
Quality	The CCG continuously seek assurance from providers that infection prevention and control policies in place ensure patient safety and quality improvement.
Privacy	This report does not contain any identifiable Information; there are no breaches of privacy expected.

Engagement	The CCG uses feedback from a variety of routes including healthcare professional feedback, incidents, complaints and patient outcomes to inform specific learning from organisations and stakeholders.			
Financial / Resource	Any costs associated with infection prevention and control are agreed as appropriate with NHS England/Improvement Regional and Finance Directors.			
Governance or Legal	Legislation and Regulations related to the roles and responsibilities involved in The Health and Social Care Act 2008 Code of Practice on the prevention and control of infections and related guidance, DH, July 2015			
Risk Description	Infection prevention and control risk assessment are carried out against The Health and Social Care Act 2008 Code of Practice on the prevention and control of infections and related guidance, July 2015.			
Risk Rating	Consequence	Likelihood	RAG Rating	GBAF Ref

NHS
Somerset
Clinical Commissioning Group

ANNUAL INFECTION PREVENTION AND CONTROL REPORT 1 APRIL 2019 TO 31 MARCH 2020

March 2021

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CONTENTS

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1 APRIL 2019 to 31 MARCH 2020

1 EXECUTIVE SUMMARY

1.1 The Director of Infection Prevention and Control (DIPC) Annual Report provides a summary on infection prevention and control activities within Somerset Clinical Commissioning Group (CCG) from April 2019 to March 2020.

1.2 The report covers Infection Prevention and Control (IPC) Commissioned Services, Somerset Partnership NHS Foundation Trust, Taunton and Somerset NHS Foundation Trust, Yeovil District Hospital NHS Foundation Trust, Primary Care services excluding specially commissioned services, and Independent Care Providers such as private hospitals, hospices and CHC funded care placements. Somerset CCG also co-commissions Weston General Hospital NHS Trust, Royal United Hospital Bath and Shepton Mallet NHS Treatment Centre.

1.3 The CCG continues to work collaboratively with a number of agencies as part of its IPC and governance taking a zero tolerance approach towards Methicillin-resistant Staphylococcus aureus (MRSA) Bacteraemia avoidable Healthcare Associated Infections (HCAIs), and local and national reduction targets for other organisms. To ensure best practise is applied consistently, the CCG IPC and Quality Teams met regularly with providers to gain assurance that all patients and residents are receiving safe and effective care.

1.4 The following organisms are subject to mandatory surveillance on the Public Health England Data Capture System (DCS):

- Methicillin-resistant Staphylococcus aureus (MRSA) Bacteraemia
- Methicillin-sensitive Staphylococcus aureus (MSSA) Bacteraemia
- Clostridiodes difficile
- Gram negative bloodstream infections (Escherichia coli, Klebsiella species, Pseudomonas aeruginosa).

2 RECOMMENDATIONS

2.1 The CCG Board is asked to receive this report and note the content for information.

3 INFECTION PREVENTION AND CONTROL GOVERNANCE MONITORING AND ASSURANCE

3.1 The Somerset Clinical Commissioning Group Governing Board of Directors collectively work within the Governance Framework to ensure and seek assurance that high quality and safe services are in place for patients, visitors and staff to minimise the risk of infection.

3.2 Overall responsibility for infection prevention and control is held by the Chief Executive Officer (CEO) with the Director of Infection Prevention and Control (DIPC) providing strategic direction and leadership on all infection prevention and control matters. The DIPC role is undertaken by the Director of Quality and Nursing supported by the deputy Director of Quality and Nursing, Consultant Microbiologists and the Team of Infection Prevention and Control Nurses.

3.3 Investment into the Somerset CCG Infection Prevention and Control Team, resulted in recruitment of one full time post to support the lead nurse in areas such as Care Homes and Primary Care.

3.4 The CCG Infection Control Committee, Somerset Infection Prevention, Control and Antimicrobial Assurance Committee (SIPAAC) meets quarterly and receives IPC and Antimicrobial Resistance (AMR) assurance reports and updates from providers, which includes Yeovil District Hospital NHS Foundation Trust, Taunton and Somerset NHS Foundation Trust, Somerset Partnership NHS Foundation Trust, Weston General Hospital NHS Trust, and Shepton Mallet Treatment Centre and independent contractors as required.

3.5 SIPAAC reports directly to the Somerset CCG's Patient Safety, Quality and Assurance Committee and Governing Body, and its key role is ensuring that there are effective systems and processes in place to reduce the risk of health care associated infections and provide assurance of such to the Board. As part of the governance and assurance framework, there is a quarterly report submitted to the Governing Board. SIPAAC is also responsible for the strategic planning and monitoring of providers IPC programme.

4 MANDATORY SURVEILLANCE OF HEALTHCARE ASSOCIATED INFECTIONS TO PUBLIC HEALTH ENGLAND

4.1 Mandatory Healthcare Associated Infections (HCAI) surveillance is carried out by providers, with the following infections reported on the Public Health England (PHE) National data capture system for Healthcare Associated Infection. The following organisms are subject to mandatory surveillance on the Public Health England Portal: MRSA, MSSA, C. difficile and GNBSIs.

5 METHICILLIN-RESISTANT STAPHYLOCOCCUS AUREUS (MRSA) BACTERAEMIA

5.1 The bacteria Staphylococcus aureus is commonly found colonising the skin and mucous membranes of the nose and throat. It is capable of causing a wide range of infections from minor boils to serious wound infections, however, most people carry this organism harmlessly. In hospitals, it can cause surgical wound infections and bloodstream infections. Cases where the infection onset is 2 or more days after admission will be considered hospital onset cases; all other cases will be considered to be community onset.

5.2 **Table 1:**

MRSA BSI attribution and number of cases			
Financial Year	**Community Origin**	**Hospital Origin (on or after day 2)**	**Total**
2019-20	2	0	2
2018-19	8	4	12
2017-18	10	3	13

5.3 Bothl MRSA BSI cases were subject to a thorough post infection review undertaken with clinicians, in both Primary and Secondary care.

5.4 Both cases were considered to be unavoidable.

5.5 No lapses in care were identified.

5.6 The total MRSA rate for Somerset CCG per 100,000 populations for 2019/20 was 0.54. This was the 2nd lowest rate regionally compared to the other 8 CCGs in the Public Health England South West reporting region. It was also lower than both the regional and national averages of 1.64 and 1.47 respectively.

5.7 The breakdown by Organisation is shown in Table 2.

5.8 **Table 2:**

Health Care provider	**No. of cases 2019/20**	**Trajectory**
Somerset Clinical Commissioning Group	2	0
Somerset Partnership NHS Foundation Trust	0	0
Taunton and Somerset NHS Foundation Trust	0	0
Yeovil District Hospital NHS Foundation Trust	0	0

Weston general hospital NHS Trust (non-Somerset patients)*	0 (2)	-
Royal United Hospital NHS Foundation Trust (non-Somerset patients)*	0 (2)	-
TOTALS	**2**	

** data in brackets is overall number of Trust attributed cases for 2019/20 for non-Somerset patients*

6 METHICILLIN-SENSITIVE STAPHYLOCOCCUS AUREUS (MSSA) BACTERAEMIA

6.1 The bacteria Staphylococcus aureus is commonly found colonising the skin and mucous membranes of the nose and throat. It is capable of causing a wide range of infections from minor boils to serious wound infections, however most people carry this organism harmlessly. In hospitals, it can cause surgical wound infections and bloodstream infections.

6.2 **Table 3:**

MSSA BSI attribution and number of cases			
Financial Year	**Community Onset**	**Hospital Onset (on or after day 2)**	**Total**
2019-20	134	39 (10)*	173
2018-19	105	44 (20)*	149
2017-18	110	23 (9)*	133

* number of cases reported by Trusts outside Somerset CCG area for Somerset patients

6.3 In 2019-20, the rate for MSSA bloodstream infections per 100,000 population was 30.93. This was the highest rate of the 9 CCGs in the South West regional, and was higher than both the regional average (23.33) and national average (21.98). Currently, there is no national reduction targets set for MSSA BSI. As part of the quality improvement work Somerset CCG plans to carry out a deep dive on the community cases and work with acute providers to carry out post infection reviews on all Trust attributed cases.

6.4 The breakdown by Organisation is shown in Table 4:

6.5 Table 4:

Health Care provider	**No. of cases 2019/20**
Somerset Community cases CCG attributed	134
Somerset Partnership NHS Foundation Trust	0
Taunton and Somerset NHS Foundation Trust	16 (18)
Yeovil District Hospital NHS Foundation Trust	9 (9)

Weston general hospital NHS Trust (Somerset patients)*	0 (5)
Royal United Hospital NHS Foundation Trust (Somerset patients)*	5 (31)
TOTALS	

** data in brackets relates to overall Trust numbers including non-Somerset patients*

7 CLOSTRIDIODES DIFFICILE

7.1 C difficile can be carried asymptomatically and may be present prior to admission becoming apparent when the toxin production is triggered by administration of antibiotics. Possible sources are asymptomatic colonisation prior to admission or via cross infection in a healthcare setting e.g. from contaminated equipment or hands of staff. Risk factors for CDI include antibiotic use, proton pump inhibitors, use of laxatives, medication and bowel procedures along with age 65 and over, presence of co-morbidities such as malignancy, diabetes, kidney and liver disease and immunosuppression from treatment.

7.2 In 2018, new categories were introduced which re-assigned C difficile attribution for 2019/20:

7.3 **Acute providers:**

Hospital onset healthcare associated (HOHA):

- Cases that are detected in the hospital two or more days after admission.

Community onset healthcare associated (COHA):

- Cases that occur in the community (or within two days of admission) when the patient has been an inpatient in the trust reporting the case in the previous four weeks.

7.4 **Community**

Community onset indeterminate association (COIA):

- Cases that occur in the community (or within two days of admission) when the patient has been an inpatient in the trust reporting the case in the previous 12 weeks but not the most recent four weeks.

Community onset community associated (COCA):

- Cases that occur in the community (or within two days of admission) when the patient has not been an inpatient in the trust reporting the case in the previous 12 weeks.

7.5 **Table 5:**

Somerset Performance for Clostridiodes Difficile					
Financial Year	**Objective**	**Community Attributed**	**Hospital Attribution**		**Total Cases**
			HOHA	**COHA**	
2019-20	124	70	31	23	124
2018-19	130	34	23	20	77
2017-18	131	99	23	N/A	122

7.6 In acute settings, a clinical team responsible for the patient care and the IPC team reviews each CDI case to determine if there were lapses in and treatment of the patients and identify any patient safety issues or learning. Completed PIRs are then peer reviewed quarterly by the CCG IPC team, the CCG Infection Control Doctor and representatives from the acute trusts (IPC and antimicrobial pharmacists) who make the final decision as to whether there have been any lapses in care. Any learning or good practice is shared.

7.7 In the community, the GP completes the post infection review and the IPC team reviews the reports and decides if there were any learning actions.

7.8 The overall C. diff rate for Somerset CCG per 100,000 population for 2019/20 was 22.17, which was an increase on 2018/19 (13.76) placing Somerset at the midpoint of the rates for the 9 CCG areas in the region. Despite this increase Somerset remained below the Public Health England South West regional average of 25.24 and the national average of 23.64.

7.9 The breakdown by Organisation is shown in Table 6.

7.10 **Table 6:**

Health Care provider	**Year end figures 2019/20**	**Trajectory for 2019/20**	**Lapse in care that could have contributed to the case**
Somerset Clinical Commissioning Group	70	83	-
Taunton and Somerset NHS Foundation Trust	26 (13)*	32	6
Yeovil District Hospital NHS Foundation Trust	15 (9)*	9	0
Somerset Partnership NHS Foundation Trust	5	4	0
Royal United Hospital NHS Foundation Trust	6 (24)*	-	0
Weston General hospital	2 (8)*	-	0

NHS Trust			
TOTALS	**124**	**124**	**6**

** data in brackets is overall number of Trust attributed cases for 2019/20 (including non-Somerset patients)*

8 GRAM NEGATIVE BLOODSTREAM INFECTIONS

8.1 In 2017, the government set an ambition of reducing healthcare associated Gram negative bloodstream infections (BSI) by 50% across the whole healthcare economy by March 2021. The target of halving healthcare associated Gram negative bloodstream infections has now been moved to 2023/24. The gram negative includes the following:

- Escherichia coli (E. coli)
- Klebsiella species
- Pseudomonas aeruginosa

9 ESCHERICHIA COLI

9.1 Often referred to as E. coli, this is part of the normal gut flora and can commonly cause urinary, biliary or gastrointestinal tract related infection leading to bloodstream infection (E. coli bloodstream infection). Some E. coli are enzyme producers known as extended spectrum beta lactamase (ESBL) which increase the resistance to multiple antibiotics.

9.2 Attention to insertion and care of urinary catheters, audits, education and reporting of catheter associated urinary tract infection are directed to further reduce HCAI E. coli BSI. Somerset CCG has been working collaboratively to find ways of reducing urinary tract infections (UTI's) which are the commonest source of E. coli BSI.

9.3 Work has included reviewing the guidance on when and how to sample urine and a review of patient information so that there is continuity within the healthcare providers. This remains a CCG priority for the forthcoming years.

9.4 In 2019/20, a total of 699 GNSIs identified, 588 GNBSI had a community onset, and 111 GNBSI occurred 48 hours or more after the patient's admission. Total number of was 699 (see Tables 7, 8 and 9).

9.5 The majority of community onset (pre-48) GNBSI is Escherichia coli.

9.6 **Table 7:**

Somerset Performance for E. Coli BSI - number of cases			
Financial Year	**Community Attributed**	**Hospital Onset (on or after day 2)**	**Total Cases**

2019-20	442	77	519
2018-19	437	74	511
2017-18	434	65	499

9.7 In 2019-20 the rate of E. Coli blood stream infections in Somerset per 100,000 population was 93.67, which was the highest rate in the South West region and was an increase on the previous year (90.99) when Somerset had been the 3rd highest rate regionally. The rate was higher than both the regional average (77.11) and national average (78.13).

9.8 **Table 8:**

Somerset Performance for Klebsiella BSI – number of cases			
Financial Year	**Community Attributed**	**Hospital Onset (on or after day 3)**	**Total Cases**
2019-20	114	21 (3)*	135
2018-19	97	31 (6)*	128
2017-18	83	25 (3)*	108

* number of those reported by Trusts outside Somerset CCG area

9.9 In 2019-20 the Somerset rate of Klebsiella per 100,000 population was 23.95, which was the 3rd highest rate in the South West Region (9 CCGs overall), and was higher than both the regional average (19.03) and national average (19.86).

9.10 **Table 9:**

Somerset Performance for Pseudomonas BSI – number of cases			
Financial Year	**Community Attributed**	**Hospital Onset (on or after day 3)**	**Total Cases**
2019-20	32	13 (2)*	45
2018-19	28	12 (4)*	40
2017-18	46	11 (3)*	57

* number of those reported by Trusts outside Somerset CCG area

9.11 In 2019-20 the Somerset rate of Pseudomonas per 100,000 population was 8.04, which was the 4th highest rate in the South West Region (9 CCGs overall), and was higher than both the regional average (6.62) and national average (7.81).

9.12 The challenge to reduce the number of GNBSI is recognised locally and nationally as the population lives longer with long term health conditions, Somerset CCG efforts to reduce the number of infections has included:

- Appointing the CGG IPC Lead Nurse to work with system partners as the lead for the GNBSI

- Identify and implement recommended improvement strategies from the CCG dip dive which included working with care homes on hydration campaign, sampling and diagnosis of urinary tract infections, management of urinary catheter and antimicrobial stewardship. This work will be part of the 2021 work plan.

10 CARBAPENEMASE-PRODUCING ENTEROBACTERIACEAE (CPE)

10.1 Over the last decade, there has been year on year increase in the incidence of infection and colonisation by multi-drug resistant carbapenemase-producing organisms, with an increase in the number of clusters and outbreaks reported in England. Acute hospitals use the Tool Kit published by PHE in 2014. The toolkit promotes early detection and management and control of CPE colonisation. Two CPE colonisations were identified on admission screening and one case was identified in the community (Table 10).

10.2 **Table 10:**

Carbapenemase-producing Enterobacteriaceae - Cases identified	
2019-2020	2 new CPE case tested on admission 1 new cases in the community
2018-2019	2 new CPE case tested on admission 0 new cases in the community
2017-2018	1 new CPE case tested on admission 0 new cases in the community

11 INVESTIGATION OF INFECTION PREVENTION AND CONTROL INCIDENTS AND OUTBREAKS

INFLUENZA

Flu is a key factor in NHS winter pressures impacting on those who become ill, the NHS services that provide direct care, and on the wider health and social care system that supports people in at-risk groups. Somerset System Flu Group aims to reduce the impact of flu in the population by bringing together key partners to develop and implement a series of complementary measures to prevent flu and to respond to outbreaks of infection promptly and to prevent further spread where these do occur. These measures help to reduce the burden of illness in the community and unplanned hospital admissions, and therefore reduce pressure on the health service generally and A&E in particular. Somerset CCG has a system-wide approach for delivering robust and resilient health and care services on annual influenza planning. All health and social care staff are offered flu vaccine.

COVID-19 PANDEMIC

11.1 On the 12th of January 2020 it was announced by the World Health Organization that a novel coronavirus had been identified in samples obtained from Wuhan City, Hubei Province, China.

11.2 The work of the IPC team was significantly impacted by the COVID-19 pandemic from mid-February 2020, initially with the management of potential cases of SARSCoV-2 infection, the setting up of the input into the Incident Control Centre, reviewing and aiding PPE management and distribution.

11.3 Since then the name has been reclassified as SARS Coronavirus-2 (SARS-CoV-2) and as of 29th of March 2020, 638,000 cases had been identified in 206 countries and areas. Public Health England (PHE) set out guidelines for IPC for both Primary and Secondary Care.

11.4 The COVID-19 pandemic was declared on 11 March 2020. The CCG put together an Emergency Planning Team and had daily operational and strategic meetings with situational updates and extended support offered to staff.

GASTROINTESTINAL OUTBREAKS (CONFIRMED OR SUSPECTED NOROVIRUS)

11.5 The South West experienced a number of Norovirus outbreaks within healthcare environments, which mirrored the cases of Norovirus infection occurring in the wider community.

11.6 All outbreaks declared within Acute and Community Hospitals in Somerset were reported to the local Health Protection Unit. Outbreaks were managed in line with the national 'Guidelines for the management of norovirus outbreaks in acute and community health and social care settings' produced by a joint national Norovirus working party in 2013.

11.7 Trust Outbreaks between April 2019 to March 2020 and shown in Table 11 below. The majority of these were Norovirus/Gastrointestinal outbreaks in Q3 and Q4, with the remainder consisting of 3 influenza outbreaks at Musgrove Park Hospital in Q3, 1 scabies outbreak at Wincanton Community Hospital (Q3), and a COVID-19 outbreak that was declared on 31/3/2020 at Bridgwater Community Hospital.

11.8 **Table 11:**

Trust	**Number of Outbreaks**	**Number of Wards Restricted**
Musgrove Park Hospital NHS Foundation Trust	25	15
Yeovil District Hospital NHS Foundation Trust	8	7
Somerset Partnership NHS Foundation Trust	5	5

CARE HOME OUTBREAKS

11.9 Outbreaks in the Care Home sector are reported to and managed by Public Health England (South West Unit). From April 2019 to 9th March 2020 when daily PHE updates ended there were a total of 72 reported outbreaks across Somerset, with 48 of

these being Norovirus or Gastrointestinal, and 24 either Influenza Like Illness (ILI) or Respiratory Tract Infections.

11.10 Reporting of and records for suspected COVID-19 outbreaks was not fully in place until April 2020 and information is therefore limited for 2019-20. However, at least 8 care home outbreaks were reported in early April 2020 as being suspected COVID-19 with onset dates during March 2020.

12 ICNET

12.1 The Infection Prevention and Control Team use a commercial software system, called ICNet, which allows the team access to years of infection historical data. In addition the system enables the team to follow up patients in the community by advising the infection prevention and control measures. This enables early intervention and risk reduction e.g. MRSA positive patients who may require decolonisation.

13 CONCLUSION

13.1 The CCG IPC team will continue taking a system wide approach in ensuring patient safety by supporting and monitoring infection prevention and control measures in place. The key priorities for 2020-2021 include:

- post infection reviews for all relevant Trust attributed MSSA cases.
- monitor and review the GNBSIs in line with the national target 50% reduction of E Coli bacteraemia by 2023-24.
- continue the implementation of the UK 5-year action plan for Antimicrobial Resistance 2019 to 2024.
- continue improving infection prevention and control measures in care homes by creating a Somerset Care Homes infection prevention and Control Link Practitioner Group.

14 REFERENCES

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14.2 Guidance on the reporting and monitoring arrangements and post infection review process for MRSA bloodstream infections from March 2018, NHS England, March 2018, available at: https://improvement.nhs.uk/documents/2512/MRSA_post_infection_review_2018_changes.pdf

14.3 Infection Prevention and Control Commissioning Toolkit Guidance and information for nursing and commissioning staff in England, RCN and IPS, January 2016, available at: https://www.rcn.org.uk/professional-development/publications/pub-005375

14.4 Preventing healthcare associated Gram-negative bloodstream infections: an improvement resource, PHE, May 2017 available at: https://improvement.nhs.uk/documents/984/Gram-negative_IPCresource_pack.pdf

14.5 Saving Lives: reducing infection, delivering clean and safe care, DH, June 2007, available at: http://webarchive.nationalarchives.gov.uk/+/http://www.dh.gov.uk/en/Publicationsandstatistics/Publications/PublicationsPolicyAndGuidance/DH_078134

14.6 The Health and Social Care Act 2008 Code of Practice on the prevention and control of infections and related guidance, DH, July 2015 available at: https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/449049/Code_of_practice_280715_acc.pdf

14.7 Update on the reporting and monitoring arrangements and post-infection review process for MRSA bloodstream infections (BSI). NHS Improvement March 2018, available at: https://www.england.nhs.uk/2018/03/provider-bulletin-28-march-2018