2019/20 PSS CQUIN Scheme

Indicator Template

[Section B to be completed before insertion in contracts.]

PSS14 Cirrhosis Care bundle

Indicator Name	***Networked Delivery of Cirrhosis Care Bundle in specialised Hepato pancreas biliary services***
A. SUMMARY of Indicator	
Indicator Sponsor (with email address)	*Prof Graham R Foster* *g.r.foster@qmul.ac.uk*
Improving Value Reference	*N/A*
Duration	Three years. *[Specify full duration of indicator, in years]*
CCG Complementarity	*[Reference any related CCG indicators]*

Problem to be addressed (maximum 150 words):

[*Briefly characterise the shortfall in quality or efficiency that the indicator is designed to address; detailed evidence should be placed in section D1****]***

- Liver disease is the fifth biggest killer in England and, since the majority of deaths are in younger people (less than 60) it is one of the leading causes of life years lost.
- The NCEPOD report 2013 on alcohol related liver disease highlighted that the management of some patients admitted with decompensated cirrhosis in the UK was suboptimal.
- Decompensated cirrhosis is a medical emergency with a high mortality. Effective early interventions can save lives and reduce hospital stay.
- Analysis shows that a proportion of patients who are likely to benefit and require specialised centre care are being treated in non-specialised hospitals (approximately 300 patients a year). For this relatively small group of patients there is an approximately 25% higher rate of in-hospital deaths than the similar cohort of patients who are treated in specialised centres.
- There is also increased length of stay of approximately 2 days per patient.

Change sought:

*[Specify what change in behaviour is sought in general terms, with detailed specification set out in section C4****.]***

Improved patient care and reduced care costs through a network model to ensure adoption of nationally developed clinical guidelines and policies regarding management of patients with decompensated cirrhosis.

This to be achieved through the introduction of the Cirrhosis Care Bundle and CLIF-SOFA scoring, alongside completion of implementation of hub and spoke Network model for liver disease. This will ensure that all patients with decompensated cirrhosis that

require specialist liver centre care are offered treated within a specialised liver centres.

We propose a new model with regional liver centres supervising local hospitals, implementing the care bundle and arranging transfer of complex cases for specialist management.

NHS England commissions the care of advanced and complex cases of chronic liver disease provided either by local hospitals with support from liver centres via a network model or at liver centres (depending on expertise available at local hospitals and severity of the case).

In accordance with the relevant service specification, all patients with severe decompensated liver disease, as defined locally, will be discussed, and if appropriate transferred to a regional hub hospital.

Each HPB Network will comprise:

- One host with a maximum of 10 partners

Each HPB Network host will operationalise the following elements, upon which payment payment will be contingent (see section C4):

- Definition of the ODN network with clear referral pathways and MOU with the different providers
- Training in the use of the cirrhosis care bundle in all partners
- Implementation of the cirrhosis care bundle in all partners
- Referral pathways for patients with advanced, salvageable disease – identified by locally agreed metrics based on validated severity scores

We also propose the introduction of the British Gastroenterology Society and British Association for the Study of the Liver guideline (the Cirrhosis Care Bundle and CLIF-SOFA scoring), alongside completion of implementation of hub and spoke Network model for liver disease. This will ensure that all patients with decompensated cirrhosis that require specialist liver centre care are treated within a specialised liver centres. This will save lives (currently patients requiring specialised centre input who are treated in non specialised centres have a higher rate of in hospital death) and reduce length of stay.

National Network system approach

The HPB Networks nationally will form a system that oversees service evaluation and monitors service delivery by evaluating outcome measures from each of their local hospitals (i.e. monitoring length of stay, mortality and referrals for transplantation) and organising a regional, accessible mortality and morbidity meeting to discuss deaths in patients from liver disease.

The HPB Network system will facilitate the implementation of agreed clinical and managerial standards and patient pathways that are based on best evidence and/or national recommendations. Through the review of audit, quality assurance and peer review, the system and its component ODNs will support providers to achieve best practice and ensure that the standards are met.

The ODNs will use the local CRS data output for quality assessment and improvement. The information from this dataset will be used to produce frequent monitoring reports, including an annual report on the performance of services.

As an output of the Network, the annual report must inform future activity and service development.

The national system's office will confirm the extent to which cost-reimbursement payments have been earned and are payable.

The national system annual report will also allow determination of whether and to what extent success payments are earned.

The network should be rolled out and developed over three years:

Year One: **First year of scheme**. The employment of a network manager will ensure the network functions and can focus on the system change and cost improvement elements that will also enhance quality of patient care. To develop system for data sharing that may include electronic means to support the pathway. First stage implementation to be rolled out.

Year Two: **The second stage.** Second stage implementation to be rolled out followed by third stage roll out. Outlying clinical practice should have been identified .The network will continue to monitor its performance and report it to the specialised commissioning hub holding the contract for the ODN host provider.

Year Three: The network should be running efficiently. Outlying clinical practice should have been identified and addressed. The network will continue to monitor its performance and report it to the specialised commissioning hub holding the contract for the ODN host provider.

Outcomes sought through this service change:

- To deliver a measurable improvement in patient mortality.
- For 50% (20,000) of the patients the introduction of a hub and spoke model could lead to a 5 day reduction in length of stay by implementing the care bundle
- For 50% of the patients the hospitals will already be using the care bundle but referrals to a tertiary centre will lead to a further 1 day reduction in length of stay.

B. **CONTRACT SPECIFIC INFORMATION** *(for completion locally, using guidance in sections C below)*	
B1.Provider (see Section C1 for applicability rules)	*[Insert name of provider]*
B2. Provider Specific Duration. What will be the first Year of Indicator for this provider, and how many years are	2019/20 2020/21 *[Adjust locally]* One/two years *[Adjust locally]*

covered by this contract?	
B3.Indicator Target Payment (see Section C3 for rules to determine target payment)	Full compliance with this CQUIN indicator should achieve payment of: Target Value: £305,000 *[Add locally ££s]*

B4. Payment Triggers.

The triggers, and the proportion of the target payment that each trigger determines, and any partial payment rules, for each year of the indicator, are set out in **Section C4.**

Relevant provider-specific variation, if any, is set out in this table.

[Adjust table as required for this indicator – or delete if no provider-specific information is required.]

Provider specific triggers	2019/20	2020/21	2021/22
Trigger 1:			
Trigger 2:			
Trigger 3:			
Trigger 4:			
Trigger 5:			

B5. Information Requirements	
Obligations under the indicator to report against achievement of the Triggers, to enable benchmarking, and to facilitate evaluation, are as set out in Section C5.	
Final indicator reporting date for each year.	Month 12 Contract Flex reporting date as per contract. *[Vary if necessary.]*

B6. In Year Payment Phasing & Profiling

Default arrangement: half payment of target CQUIN payment each month, reconciliation end of each year depending upon achievement.

[Specify variation of this approach if required]

C. INDICATOR SPECIFICATION GUIDE: STEP CHANGE INDICATORS

C1. Providers to whom Applicable

Nature of Adoption Ambition:

HPB specialist providers, each networked to around ten non-specialist partners.

List of Providers for whom Indicator is Applicable

Potential list of host providers is

1	RTD	**The Newcastle upon Tyne Hospitals NHS FT**
2	RXR	**East Lancashire Hospitals NHS Trust**
3	RW3	**Manchester University NHS Foundation Trust**
4	REM	**Aintree University Hospital NHS Foundation Trust**
5	RQ6	**Royal Liverpool & Broad Green University Hosp'ls NHS T**
6	RHQ	**Sheffield Teaching Hospitals NHS Foundation Trust**
7	RWA	**Hull and East Yorkshire Hospitals Trust**
8	RR8	**Leeds Teaching Hospitals NHS Trust**
9	RTG	**University Hospitals of Derby and Burton NHS FT**
10	RWE	**University Hospitals Leicester NHS Trust**
11	RRK	**The University Hospitals Birmingham NHS FT**
12	RX1	**Nottingham University Hospitals NHS Trust**
13	RM1	**Norfolk and Norwich University Hospitals NHS FT**
14	RGT	**Cambridge University Hospitals**
15	RYJ	**Imperial College Healthcare NHS Trust**
16	RAL	**Royal Free London NHS Foundation Trust**
17	R1H	**Barts Health NHS Trust**
18	RJ7	**St George's University Hospitals NHS Trust**
19	RJZ	**Kings College Hospital NHS Foundation Trust**
20	RA2	**Royal Surrey County Hospital NHS Foundation Trust**
21	RXH	**Brighton and Sussex University Hospitals NHS Trust**
22	RTH	**Oxford University Hospitals NHS Foundation Trust**
23	RHM	**University Hospital Southampton NHS Foundation Trust**
24	RHU	**Portsmouth Hospitals NHS Trust**
25	RA7	**University Hospitals Bristol NHS Foundation Trust**
26	RK9	**University Hospitals Plymouth NHS Trust**

C2. Provider Specific Parameters

The indicator requires the following parameters to be set for each provider in advance of contract, in order to determine precisely what is required of each provider, and/or to determine appropriate target payment (as per C3.)	*N/A*

C3. Calculating the Target Payment for a Provider

The target overall payment for this indicator (the payment if the requirements of the indicator are fully met, to be set in Section B3 above) should be calculated for each provider, according to the following algorithm:

Year One: £305,000

Year Two: : £305,000

Year Three: £240,000

See Section D3 for the justification of the targeted payment, including justification of the costing of the indicator, which will underpin the payment.

C4. Payment Triggers and Partial Achievement Rules

Payment Triggers

The interventions or achievements required for payment under this CQUIN indicator are as follows:

35 HPB providers will be delivering decompensated cirrhosis care level 2 and 3 and working in a network model with linked local hospitals.

Support in engaging local teams	May 2019
Develop local implementation project with local commissioners and consultants	June 2019
Put in place new local pathways	September 2019
Monitor benefits	September 2020, December 2020

Descriptions	First Year of indicator	Second Year	Third Year
Trigger 1: Infrastructure	Employment of a network manager to ensure the network functions and can focus on the system change and cost improvement		

	elements that will also enhance quality of patient care.		
Trigger 2 MOUs	Establish and define the local network with MOUs in place with >75% of designated providers.	MOUs in place with all network providers.	
Trigger 3 Data Sharing, Identifying Outliers	To develop system for data sharing that may include electronic means to support the pathway.	Outlying clinical practice should have been identified.	Outlying clinical practice identified and ***addressed***.
Trigger 4 Cirrhosis Bundle	Completion of cirrhosis bundle in >50% of patients with decompensated cirrhosis admitted throughout the region.	Completion of cirrhosis bundle in >75% of patients with ecompensated cirrhosis admitted throughout the region	Completion of cirrhosis bundle in >75% of patients with decompensated cirrhosis admitted throughout the region
Trigger 5 National Infrastructure	Payment of £8,000 overhead to the national coordinating centre.	Payment of £8,000 overhead to the national coordinating centre.	Payment of £8,000 overhead to the national coordinating centre.

Percentages of Target Payment per Payment Trigger

The following table sets out the proportion of the Target payment that is payable on achievement of each of the Payment Triggers.

Percentages of Target Payment per Trigger	First Year of indicator	Second Year	Third Year
Trigger 1	10%		
Trigger 2	30%	30%	
Trigger 3	10%	10%	40%
Trigger 4	45%	55%	55%

Trigger 5	5%	5%	5%
TOTAL	100%	100%	100%

Partial achievement rules

All triggers paid on an all or nothing basis.

Definitions

C5. Information Flows: for benchmarking, for evaluation, and for reporting against the triggers.

Reporting of Achievement against Triggers:

Reports from the national system office.

Information for Benchmarking:

See Trigger 3.

Information Governance:

Reporting Template requirement:

C6. Supporting Guidance and References

Further details on implementation, and references to documents that will support implementation:

D. Indicator Justification and Evaluation

D1. Evidence and Rationale for Inclusion

Evidence Supporting Intervention Sought

Evidence supporting characterisation of the problem

- Inpatient care of chronic liver disease for 2017-18 is estimated to be £121m of which £3.4m is directly funded by NHS England through Specialised Commissioning (NCDR contract value 2016/17 data).

Decompensated cirrhosis due to alcohol abuse, viral liver disease or fatty liver disease is a common reason for costly, emergency hospitalisation.

Chronic liver disease is now the fifth largest cause of death, and the leading cause of months of life lost for women under the age of 75 years.[i] The considerable increase in the incidence of chronic liver disease and cirrhosis is reflected in hospital admissions: in 1998/99, there were 7982 admissions for cirrhosis; by 2010/11, this had increased by 159% to 20,697 admissions.

NCEPOD report on deaths from alcoholic liver disease identified very poor practice with many patients dying without being seen by a doctor with training in liver medicine. (https://www.ncepod.org.uk/2013arld.html)

Analysis of HES data by the HPB CRG appears to show that a very large number of trusts manage very few patients with decompensated cirrhosis and mortality and length of stay is increased in the 'low volume' centres.

Evidence regarding the choice of behavioural change to remedy the problem -- in terms of its cost-effectiveness.

The "cirrhosis care bundle" is a guideline that helps identify patients with acute deterioration in liver function and the cause of this whilst providing a checklist designed to optimize a patient's management in the first 24 hours when specialist liver/gastro input might not be available. It also recommends that escalation of care to higher level should be considered in patients not responding to treatment when reviewed after 6 hours, particularly in those with first presentation and those with good underlying performance status prior to the recent illness. The cirrhosis care bundle has been shown to reduce length of stay by 3 days (Dyson et al Aliment Pharmacol Ther. 2016 Nov; 44(10): 1030–1038.

The care bundle has been shown to reduce length of stay by 3-5 days.

Rationale of Use of CQUIN incentive

CQUIN as an instrument is justified if net costs beyond normal service requirements are incurred by providers whilst benefits and cost savings accrue to patients and commissioners.

This will save lives (currently patients requiring specialised centre input who are treated in non specialised centres have a higher rate of in hospital death) and reduce length of stay.
For 50% (20,000) of the patients the introduction of a hub and spoke model could lead to a 5 day reduction in length of stay by enforcing the care bundle
For 50% of the patients the hospitals will already be using the care bundle but referrals to a tertiary centre will lead to a further 1 day reduction in length of stay.
Currently approximately 300 patients a year who require specialised centre treatment are treated in a non-specialised centre and would have escalated care.

Analysis suggests that there is unlikely to be a financial saving from this initiative, however we have also identified that the improvement can be gained without incurring additional commissioner costs.

D2. Indicator Duration and Exit Route

The appropriate duration of an indicator depends upon how long CQUIN support is required before the change in behaviour sought can be embedded in services specification or otherwise.

D3. Justification of Size of Target Payment
The evidence and assumptions upon which the target payment was based, so as to ensure payment of at least 150% of average costs (net of any savings or reimbursements under other mechanisms), is as follows: Each network will employ a network manager (A4C Band 8C plus 30% overhead, c.£90k) and 0.5-1.0 days per week of the lead clinician £25k). Combined cost c. £115k. Contribution to national system of ODNs overhead -- £8k Infrastructure costs to develop IT systems to support sharing of pathway information and data collection. - £80k Cost to each of the networks is £203K in year1 and year 2. **PLUS CQUIN premium of 50% → £305k** Year 3 £160k plus £50k infrastructure cost

D4. Evaluation: Approach, data and resources	
Evaluation Approach: Improved outcomes in patients with decompensated cirrhosis with a reduced length of stay and reduced mortality are sought. For 50% (20,000) of the patients the introduction of a hub and spoke model could lead to a 5 day reduction in length of stay by implementing the care bundle For 50% of the patients the hospitals will already be using the care bundle but referrals to a tertiary centre will lead to a further 1 day reduction in length of stay. Currently approximately 300 patients a year who require specialised centre treatment are treated in a non-specialised centre and would have escalated care.	
Information for Evaluation	*[Information flows required for evaluation should be referenced here, building on those set out at C5]* The new HPB medicine dashboard proposed in the revised HPB Service Specification will provide data on these metrics on a quarterly basis.
Resources for Evaluation	

[i] North West Public Health Observatory (2007) Indications of Public Health in the English Regions 8: Alcohol. Association of Public Health Observatories. http://www.apho.org.uk/resource/item.aspx?RID=39304