



Information governance and data collection to support screening

Overview

- Linked antenatal and newborn screening programme for Sickle Cell & Thalassaemia (SCT) in England
- SCT newborn screening is part of the NHS Newborn Blood Spot Screening Programme, which screens for 9 conditions
- Programme standards define what is required to deliver a high quality, effective screening programme and encourage continuous improvement
- Key performance indicators (KPIs) focus on standards that require closer monitoring and/or improvement



Data & information governance

Data collection is important for:

- understanding prevalence and demand for services
- monitoring performance
- evaluating the programme
- identifying areas for development
- updating best practice to improve outcomes
- Information governance systems support:
 - robust referral processes
 - the effectiveness of the screening programme
 - equality of delivery

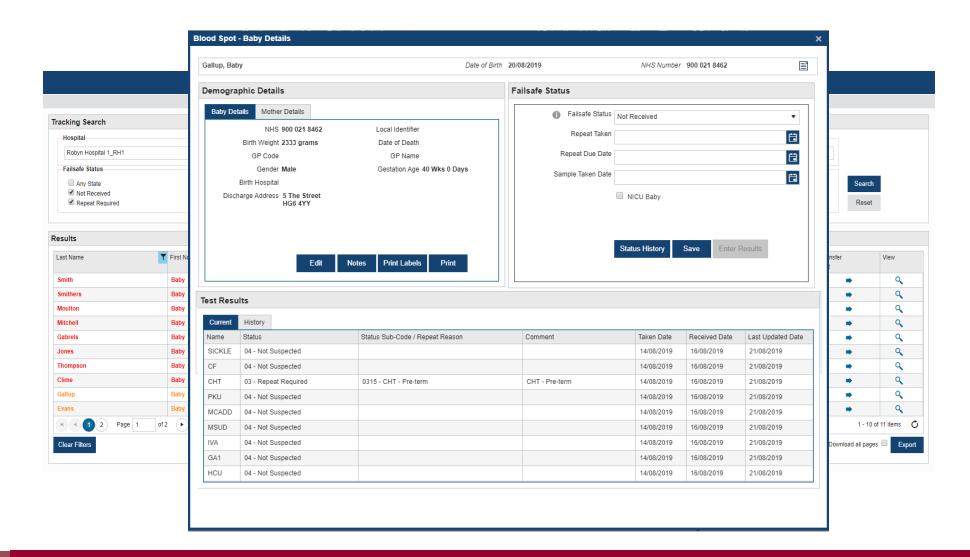


Newborn Blood Spot Failsafe Solution

- The failsafe system is used to ensure all children born in England are screened and results are recorded for each of the 9 conditions
- Live birth information feeds into the system and records are matched with maternity units
- Newborn blood spot results are uploaded to baby records. Repeat test requirements are included
- Where no initial sample cards are recorded, baby records are flagged on amber on day 12 and red day 17
- Where repeats are required and not recorded on the system, baby records are flagged on day 35
- The failsafe system is used in addition to existing pathways; it acts to provide assurance that screening is being delivered correctly



System screenshot





SCT newborn outcomes system

•The Sickle Cell and Thalassaemia newborn outcomes system is currently being implemented in England

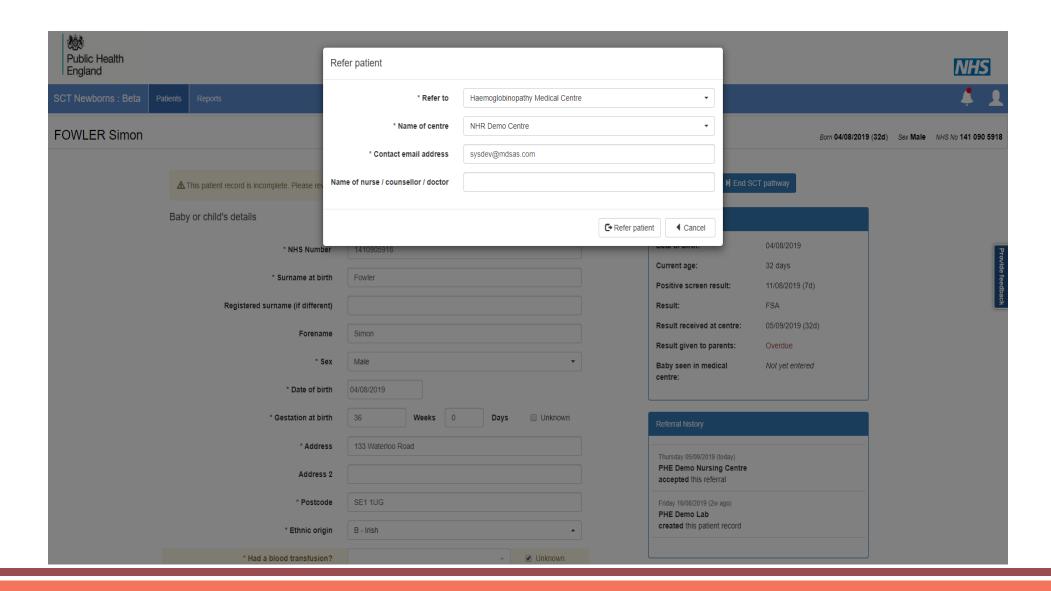
- •The system aims to:
- support referral of screen positive infants from screening laboratories into treatment services
- improve patient safety by allowing users to view the status of patients along the care pathway
- improve quality and completeness of data to evaluate the programme
- reduce duplication of data entry
- reduce manual chasing through automated alerts



Demonstration



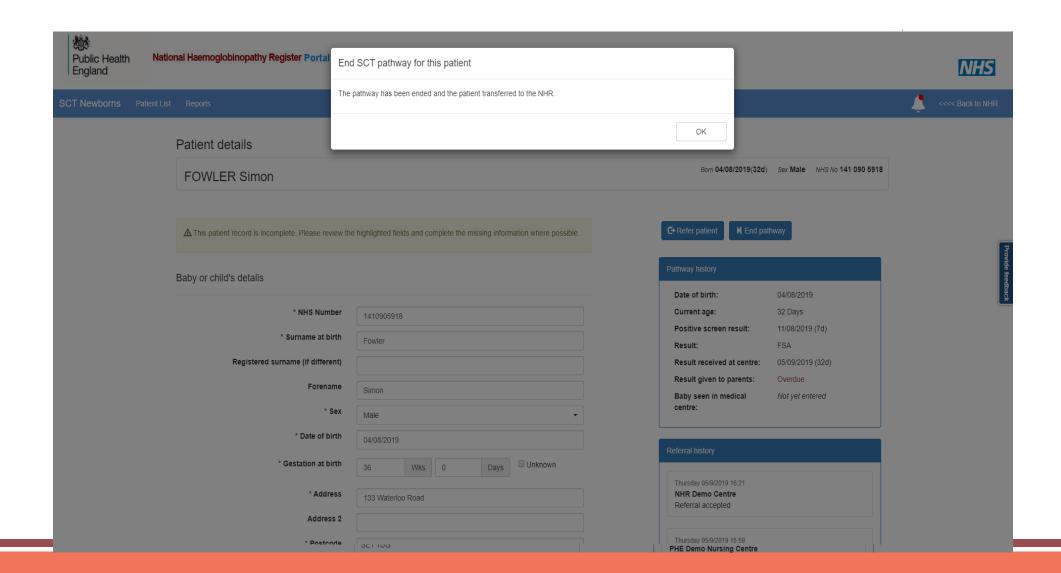
Screen shots of system







Screenshots (NHR access)







Link to national registry

- The National Haemoglobinopathy Registry (NHR) is a database of patients with red cell disorders (mainly Sickle Cell Disease and Thalassaemia Major) living in the UK.
- It collects data required by the Department of Health and its aim is to improve patient care.
- The newborn outcomes system enables clinicians to 'pull through' patient information and create records on the National Haemoglobinopathy Registry (NHR)
- There is a national drive to use it more comprehensively and this process reminds clinicians to gain consent and use the NHR
- The link also reduces the need to create a new entry manually



Safety and evaluation

- Having systems like these in place:
- improves patient safety
- standardises processes nationally
- makes the programme more robust
- enables more effective evaluation and monitoring of screening processes – locally and nationally
- facilitates service design based on prevalence/ demand for services
- provides an audit trail for tracing back issues or investigating incidents



Thank you

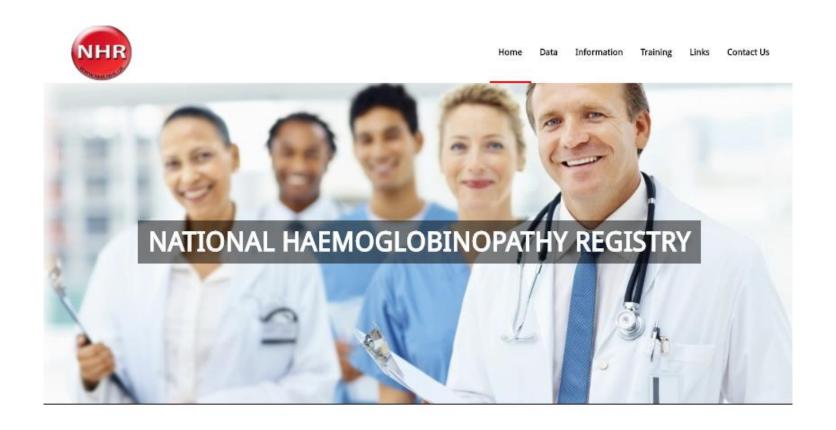




Haemoglobinopathy Registries / Dashboards

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UK





WELCOME TO THE NHR

The National Haemoglobinopathy Registry (NHR) is a database of patients with red cell disorders (mainly Sickle Cell Disease and Thalassaemia Major) living in the UK. This new database collects data, which is required by the Department of Health from Haemoglobinopathy centres. The central aim of the registry is to improve patient care.



Established 2008

 Following commencement of National Antenatal and Neonatal Screening Programme in 2004

What does it do?

Data collection

All UK patients with major haemoglobinopathies/rare anaemias



What are the benefits of the NHR?

- Enhance monitoring of changing demographics
- Enhance service delivery Funding staff and infrastructure
- Improves patient outcomes
- Resource for research
- Good practice A template for limited resource countries

National Haemoglobinopathy Registry = NHR









Commissioned by NHS England via the Haemoglobinopathies CRG

The NHR Steering Group

The NHR steering group oversee and guide all activities of the NHR. It has a broad membership giving all stakeholders an input into the running of the registry. Stakeholders include clinicians, commissioners, patient societies, patient representation and NHS England.

Alison Thomas	Consultant Haematologist
Annette Wood	Commissioner
Cathy Coppinger	Screening Programme
Claire Foreman	Commissioner
Elaine Miller	UK Thalassaemia Society Representative
Farrukh Shah	Consultant Haematologist and Interim Chair of NHR
Jo Howard	Consultant Haematologist
John James	Sickle Cell Society
Marilyn Roberts Harewood	Consultant Haematologist – Clinical Chair - On leave
Mary Petrou	UK Thalassaemia Society Representative
Sara Trompeter	Consultant Haematologist
Shivan Pancham	Consultant Haematologist
Subarna Chakravorty	Consultant Paediatric Haematologist
Wale Atoyebi	Consultant Haematologist
Dr Robert Hollingsworth	MDSAS









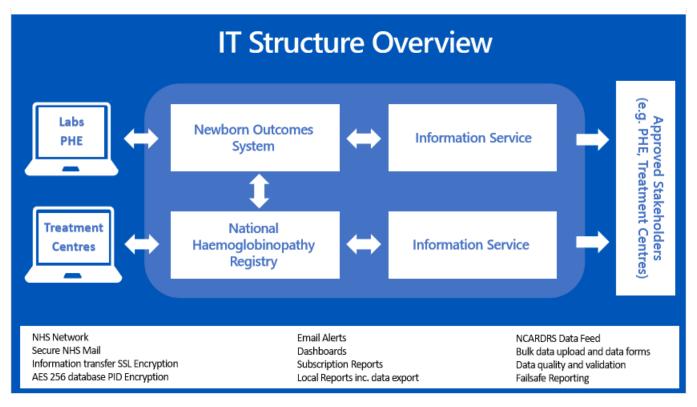


2018 /2019 Report



Total Diagnosis by Gender

Name	Male	Female	Not Specified	Total
Thalassaemia	973	942	0	1915
Sickle Cell	6353	7251	3	13607
Other	221	239	0	460
Total	7547	8432	3	15982



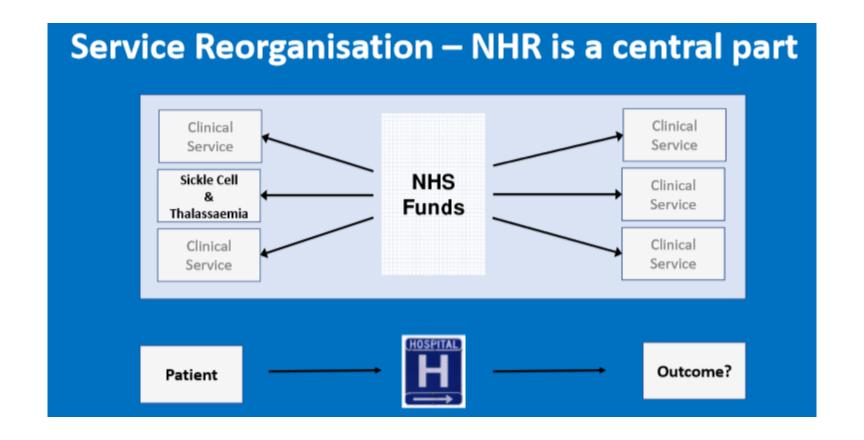
E.g. In Kaduna State

Laboratory = Patrick Yakowa Hospital, Kafanchan

PHE = Primary Health Care Development Agency

Treatment Centre = Barau Dikko Teaching Hospital (BDTH)









The NHR Dataset is broken down into three main data collection types:

Datasets

1. Patient Data

Consent Obtained	Yes / No	
NHS number	Unique patient identifier	
Title	Patient title e.g. Mr, Mrs etc	
Forename	Patient Forename	
Surname	Patient Surname	
Gender	Male / Female	
Date of Birth	Date of Birth of the Patient	
Ethnicity	NHS standard list of ethnicities	
Post code	Patient post code	
GP practice code	Code to identify location of GP Practice	
Year of diagnosis	When patient was diagnosed	
Diagnosis	Patient diagnosis	
Therapy	Treatment method patient receiving e.g Iron Chelation	
Therapy type	Specific details of treatment method e.g Deferiprone	
Transfusion frequency	If applicable how many transfusions given e.g 0-20, >20-50 etc.	
Year of first transfusion	Year first transfusion given to patient	
Bone marrow transplant	Yes / No	
Receives regular penicillin usage	Yes / No	
TCD monitoring	Yes / No	
Regular Transfusion	Yes / No	
Other Comments	Other Comments	

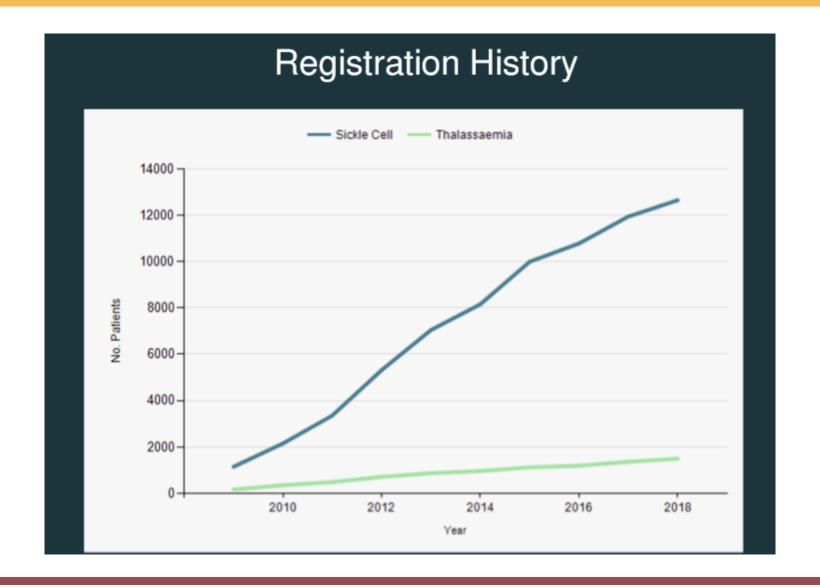
2. Adverse Events

NHR Patient Consent Obtained	Yes / No
NHS Number	Unique Patient Identifier
Gender	Male / Female
Diagnosis	Patient diagnosis
Event Type	The type of event e.g. death
Date of event	The date which the event took place
Age of patient	The patients age in months (up to 1st year), or years
Other Information	Any other relevant information

3. Annual Review

Management Plan		
Date Set	Date when management plan was set	
Date Completed	Date when management plan was completed	
	The action required to be undertaken within the management	
Todo Action	plan	
About the patient		
Date of Annual Review	The date when the annual review was due for completion	
Patient failed to attend	Whether the patient attended or not	
Height (cm)	The patients height in cm	
Weight (kg)	The patients weight in kg	
Spleen Size (cm)	The patients spleen size in cm	
Centre change in this review		
period	Yes / No	
Patient Status	The patients status e.g. active, no longer seen etc	
Date of no longer seen	The date when the patient was no longer seen	
Date of death	The date of the patients death	
Transferred to	Which centre the patient was transferred to	
Date transferred to	The date of when the patient transfer took place	
	Specialist Haemoglobinopathy Team (SHTC) or Secondary Care	
Centre type	Centre - Local (LHT)	
Number of hospital admissions in	The number of times the patient has been admitted during the	
this review period	review period	
Have they had a transfusion in	N /N-	
this review period	Yes / No	
Has there been a pregnancy in this review period	Yes / No	
Outcome of pregnancy	e.g. C section, live birth etc	
Outcome or pregnancy	e.g. C section, live birth etc	
Compliantions		
Complications	Wheekeeska askinsk has Hanskinia C	
Hepatitis C Status	Whether the patient has Hepatitis C	
Date of Hepatitis C status	The date of when the status was diagnosed	
HIV Status	Whether the patient has HIV	
Date of HIV status	The date of when the status was diagnosed	
Therapy initiated or continued in this review period		
Therapy	Treatment method patient receiving e.g Iron Chelation	
Therapy type	Specific details of treatment method e.g Deferiprone	
Transfusion frequency	If applicable how many transfusions given e.g 0-20, >20-50 etc.	
Therapy start / end date	When therapy was started and completed	

Date of Vaccination	The date of when the vaccination took place	
Expiry of vaccination	When the vaccination expires	
Comments	Any comments related to the vaccination	
	,	
Serious adverse events in this review period		
Serious Adverse Event	Additional adverse events during the review period not already reported	
Reason for ITU admission	Why the patient was admitted	
Pulmonary Hypertension Proof	How pulmonary hypertension was proved	
Date of serious adverse event	The date of when the serious event took place	
Comments	Any further comments relating to the event	
Other Complications		
Bone Problems	Whether the patient has had any bone problems e.g. fracture	
Endocrinopathy Detail	Detail of endocrinopathy reported e.g. diabetes	
Endocrinopathy start date	When the patient was diagnosed with the endocrinopathy	
Endocrinopathy continued	Whether the endocrinopathy has still present	
Comments	Any further comments relating to the endocrinopathy	
Investigations in this Review Period		
Investigation details	What investigation have occurred during the review period e.g. audiometry, blood pressure etc.	
Results		
Myocardial	Myocardial test score	
Hepatic	Hepatic test score	
Liver Iron Concentration	Liver Iron Concentration test score	
Medications in this review period		
Medication	Medication that the patient has use during the review period	
Medication start date	When the medication was started	
Medication end date	When the medication was finished	
Medication continued	Whether any further medication is required	
Comments	Any comments relating to medications taken	







Number of Patients by Diagnosis

Condition	Diagnosis	Patients
Sickle Cell		12,191
	HbSS	8,174
	HbSC	3,192
	SickleB+ thal	456
	SickleB0thal	202
	HbS/HPFH	93
	HbS /D Punjab	26
	HbS/E	19
	HbS beta +	10
	HbS beta0 thal	8

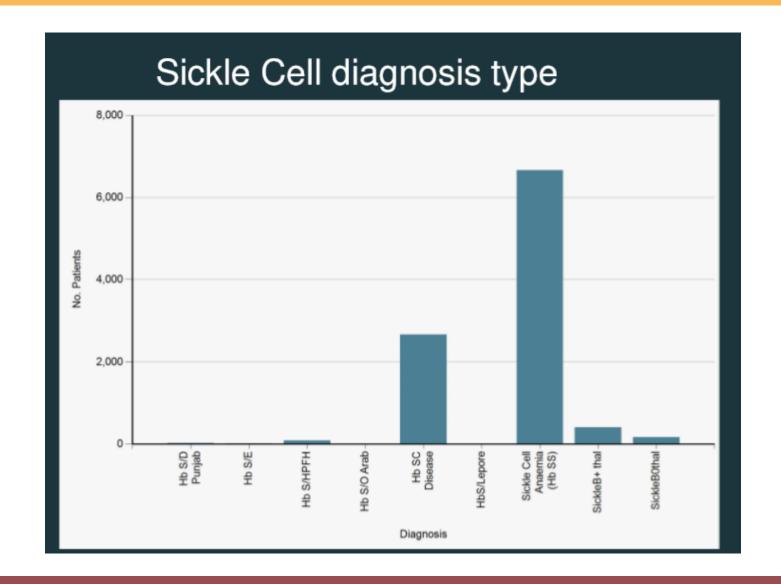




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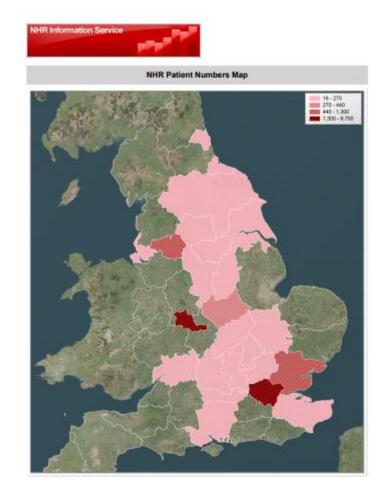




Number of Patients at Each Centre

Centre	Sickle	Thal	Other	Total
Guy's and St Thomas	1,081	25	26	1,132
Kings College Hospital	911	26	5	942
Royal London	730	109	29	868
Manchester University NHS Foundation Trust	617	149	41	807
North Middlesex	541	48	1	590
Birmingham - City Hospital	451	88	15	554
The Whittington Hospital NHS Trust	318	220	6	544
Newham University Hospital	498	10	6	514
Queens Hospital (BHR)	438	36	15	489
University College London Hospitals	282	159	44	485
Imperial College Healthcare NHS Trust	410	59	14	483

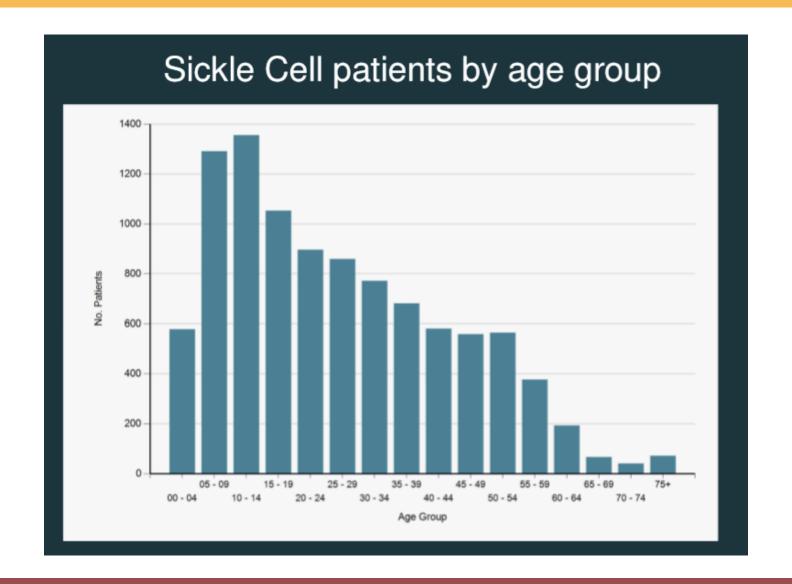




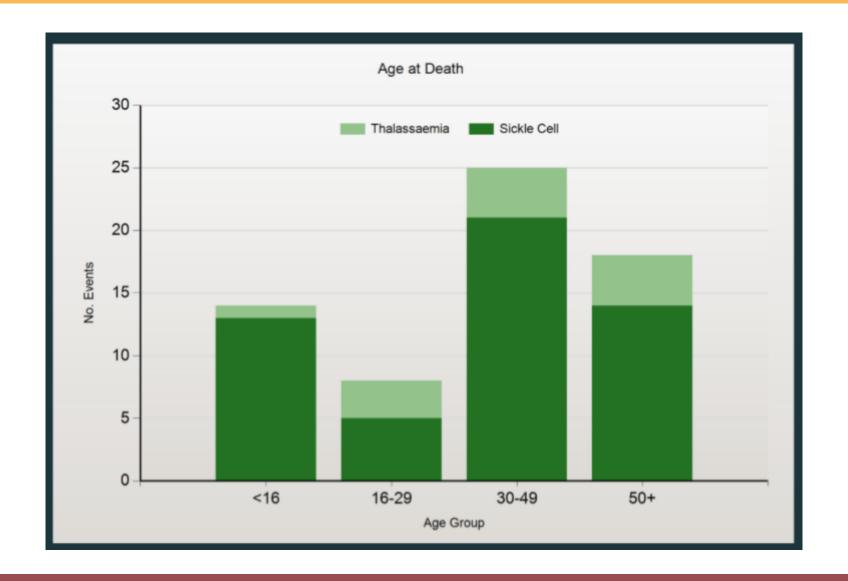


Area	Patients
Greater London	9610
West Midlands	1615
Greater Manchester	1158
Essex	597
Leicestershire	296
South Yorkshire	257
Nottinghamshire	232
North Yorkshire	185
Buckinghamshire	171
Northamptonshire	164
Merseyside	156

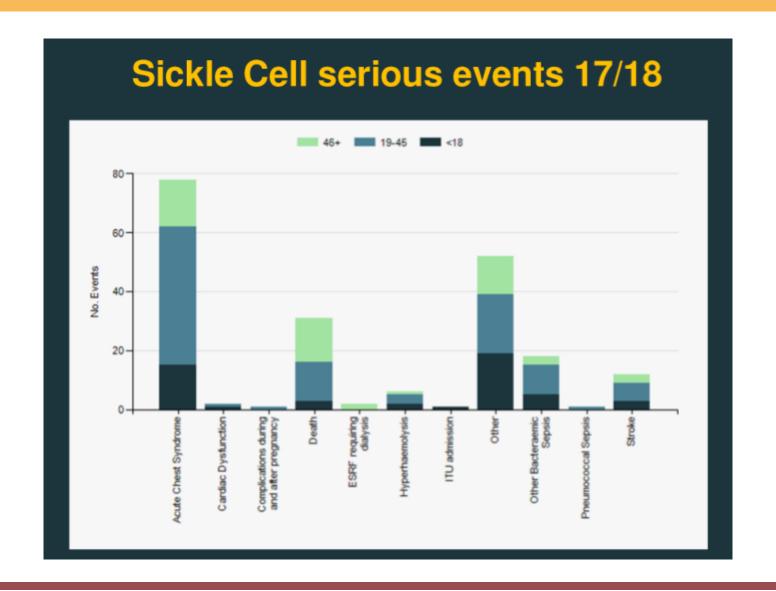




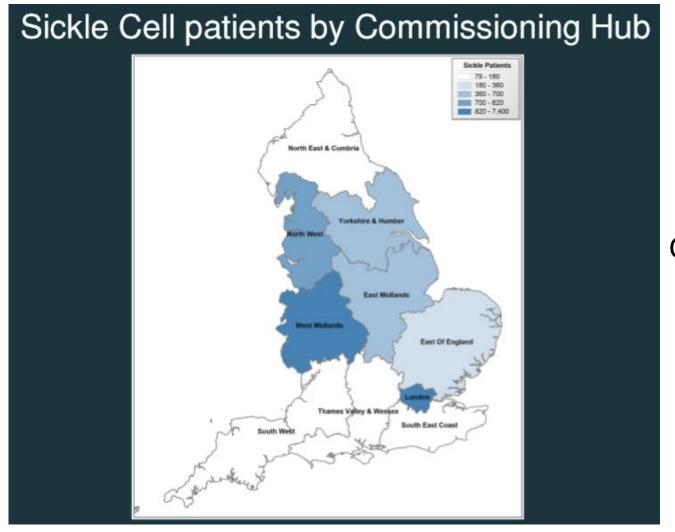








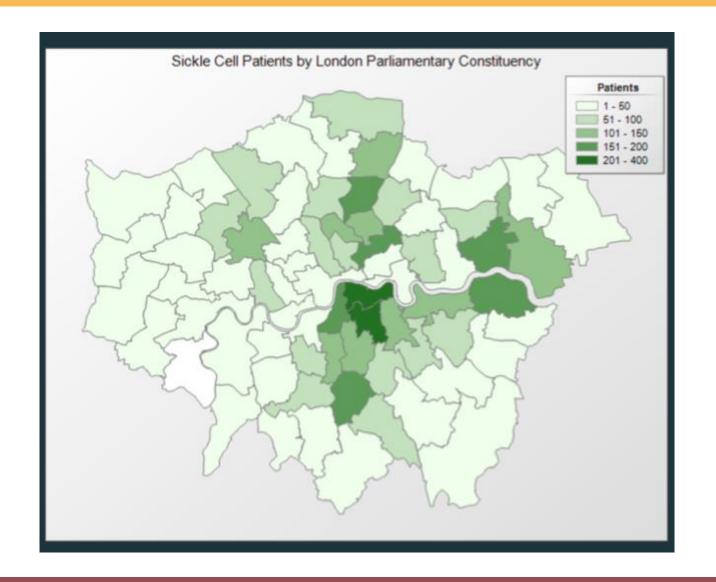




Commissioning Hub

= Nigerian States





We can engage our lawmakers as advocates







- Support commissioning and management of specialist centres
- Development of hand held records
- Evolve into a patient management system
- Year of care funding
- Overall improving outcomes







Conclusion

The National Haemoglobinopathy Registry (NHR) is vital to support the management and improvement of the Haemoglobinopathy service





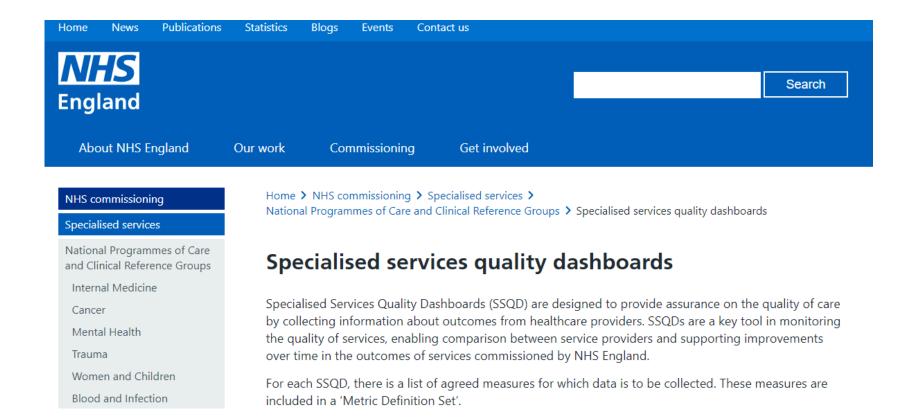
UK Haemoglobinopathy Dashboard

- Commissioned by NHS England
- Quality surveillance reporting system
- Identical standards across the UK
- Continuously monitored
- Data flow from NHR



Poor performance – Investigations/sanctions





Information downloaded from the National Haemoglobinopathy Register



Haemoglobinopathy Quality Dashboard 2018/19

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															Reporting Periods			
Indicator Reference Number	Domain	There	Maneum	Rationals	Name of Indicator I Description	Numerator	Denominator	Period Type	Гиеринсу	Data Source Numerator	Deta Source Denominator	Target	Interpretation Guidance	Notes.	61	O2	00	04
HAEIVIOI.	Domain 3: Holping people to recover from episcoles of fill health or following linkary	Clinical process	Serius eveti, estero, de to Meli Piperio de to Meli Piperio de to Meli Piperio de to Meli Piperio de todo estero este	Evidence that each adverse event has been andersed event has been and and within reheart. by either nestably review of serious case review. Input to national movies of all adverse events.	Proportion of Serious events extreed on to Nikil. system and mykened system and mykened within network modifishly //monality meetings	Number of adverse exects reported to the control to	Tetal number of addense even's reported on NHR, within the reporting period of the reporting period.	6 month rolling	Quarterly	Provider subtritived data	Provider submitted data		Higher is better	Series in circles I information: Series in circles in requirely investigation defined by the NFSky 2010 Polision in circles in require just described in the Series in circles in require just described in the Series in relicion in circles in Series in the Series in relicion in Series i	Jan 18 - Jun 18			
HAEWIO2	Domain 3: Helping people to necover from ephodes of fil health or following linkery	Clinical process	Tions Cranial Doppler (TCD) recritaring	TCD being delivered to at risk greap plus asservance that nation il guidelines on frequency, methodology and training are being followed.	Proportion of children (aged between 2 and 96 years old) within at risk group (5/5 and 5/bers 0 This) receiving trans cranial doppler monitoring within Trust	Number of children busing TCD monitoring within national guidelines	Total number who are eligible for TCD receiluring	6 month rolling	Cuerterly	Provider submitted data	Provider submitted data		Higher is better		Jan 18 - Jun 18		Jul 18 - Dec 18	
HAEM03i	Domain 3: Helping people to recover from episodes of ill health or following linjury	Clinical process	Timel irans of pain relief in sidde cell disease	Indicator to measure that potients are given pain nellef within half an hour of presentation with sickle crisis, as per NICE guidelines.	Percentage of patients given pain relief within half an hour of presentation with sickle crists, as per MCE guidelines	Number of patients achieving this standard	Total number of events (patients presenting with sickle crisis), within the reporting period.	Annual	Annual	Provider submitted data	Provider submitted data		Higher is better	Aersual reporting. If a specialist centre is supervising other Trusts then a minimum of an audit from those centres of this ansails. This should only relate to pain refer glaven as an urgancy with either within Erre specicy department or acute admissions unit.				Apr 18 - Mar 39
HNEMO4A	Donnain 3: Helping geogle to recover from ephodes of ill health or following linjury	Clinical process	Screening to access to specialist care	Indicator to measure that all patients with possible sicide disorders identified by neonatal screening have entered care pathway.	Proportion of patients with possible sicide disorders identified by neonatal screening who have been entered onto care pathway	Number of patients entered onto care pathway	Total number of identified patients, within reporting period	Annual	Arrest	Provider submitted data	Provider submitted data		Higher is better					Apr 18 - Mar 19
НАЕМО4В	Domain 3: Helping people to recover from episodes of all health or following injury	Clinical process	Screening to access to specialist care.	Indicator to measure the mamber of children beginning penicillin at or before 3 months of age, as per screening programme guidelines.		Number of children beginning periodlin within screening guidelines	Total number of children eligible to begin pericillin sethin reporting period	Annual	Annual	Provider submitted data	Provider submitted data		Higher is better					Apr 18 - Mar 19
HADVOS	Domain 3: Helping people to recover from episodes of all health or following injury	Clinical process	Annual ceviese via NHT.	To measure data entry each year into annual neview system of NHR.	Duta entry each year into annual review system of NHR	Number of arrual reviews undertaken by the centre as recorded by NHR entry within that year	Total number of registered patients eligible for annual reviews on NHR by that centre	Annual	Annual	Provider submitted data	Provider submitted data		Higher is better					Apr 18 - Mar 19
	Enhancing quality of life for people with long-term conditions	Clinical process	Assessment of adequacy of chelation, aimed pretions inantly a chassaemia, if any high risk sickle included glease identify in return		Proportion of eligible patients on long term transfusion who receive cardiac MRI	cardiac MRI	Number of patients (adults and children) eligible for cardiac MRI, within the reporting period	Annual	Annal	Provider submitted data	Provider submitted data			if any high risk Sickle included, please note in the indicator comments/notes.				Apr 18 - Mar 19
HAENOSAI	Domain 2: Enhancing quality of life for people with long-term conditions	Clinical process	Assessment of adequacy of chelation, aimed predom inantly at theosemia, if any high risk sickle included please identify in return	Measures adequacy of chelation; Caroliac MRI of amore than 20 ms.	Proportion of patients receiving cardiac MRI who achieved more than 20 ms	Number of those who had MRI who achieved figure more than 20 ms	Number of patients who received cardiac MRI within reporting period	Annual	Annual	Provider submitted data	Provider submitted data			if any high risk Sakile included, please note in the indicator convenents/notes.				Apr 18 - Mar 19



Shared commitment to quality

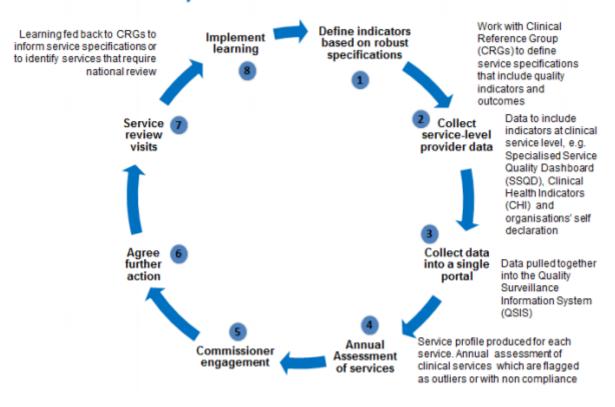
Our single shared definition of quality

which as national bodies we have committed to embed at every level of our work and in all our interactions.





Quality Surveillance Process

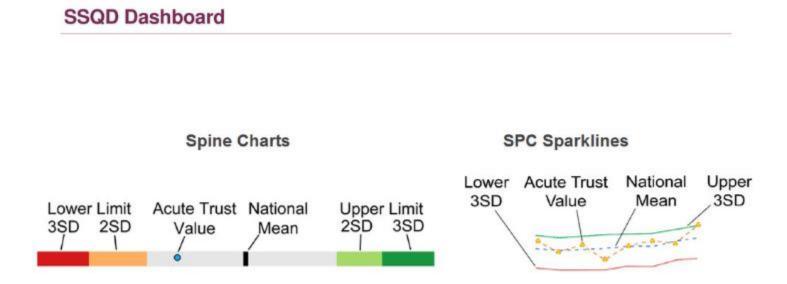




TCD monitoring Hb SS & Hb SC Patients aged between 2 and 17

Patients	TCD monitoring
3605	2171 (60%)







17/07/2019

https://www.qst.england.nhs.uk/teams/1795/specialised_services_quality_dashboards/surveys/90053

Q4 2018/2019 - SSQD Q4 2018/2019 Dashboard

Ref	Description	Period	Num	Denom	Value	Nat Avg	Chart	Trend
HAEM02	Proportion of children (aged between 2 and 16 years old) within at risk group (5/5 and 5/bets 0 Thal) receiving Trans cranial doppler monitoring within Trust	Oct 18 to Mar 19	20.0	20.0	100.0	90.1	6	
HAEM03i	Proportion of patients given pain relief within half an hour of presentation with sickle crisis, as per NICE guidelines	Apr 18 to Mar 19	15.0	39.0	38.5	54.9		
HAEM04A	Proportion of patients with possible sickle disorders identified by neonatal screening who have been entered onto care pathway	Apr 18 to Mar 19	0.0	0.0		98.4	Insufficient data to produce chart.	
HAEM04B	Percentage of eligible children beginning penicillin at or before 3 months of age as per screening programme guidelines	Apr 18 to Mar 19	0.0	0.0		92.5	Insufficient data to produce chart.	
HAEM05	Data entry each year into annual review system of NHR	Apr 18 to Mar 19	87.0	88.0	98.9	79.4		•
HAEM06Ai	Proportion of eligible patients on long term transfusion who receive cardiac MRI	Apr 18 to Mar 19	*	*	100.0	82.2	6	•
HAEM06Aii	Proportion of patients receiving cardiac MRI who achieved more than 20 ms	Apr 18 to Mar 19	*	*	33.3	84.5		
НАЕМО6Ві	Proportion of eligible patients who receive MRI for liver iron - sickle only	Apr 18 to Mar 19	7.0	7.0	100.0	83.8		•



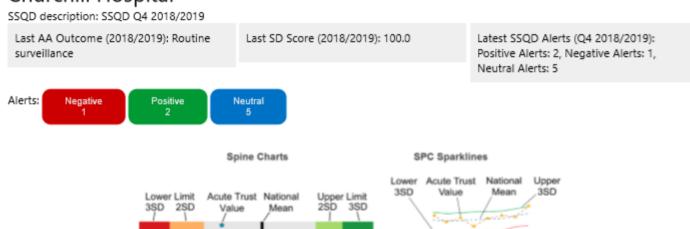
17/07/2019

https://www.qst.england.nhs.uk/teams/1795/specialised_services_quality_dashboards/surveys/90053





Specialised Services for Haemoglobinopathy Care (All Ages) at Churchill Hospital





Action plan to improve performance



Adult Haemoglobinopathy Service

The audit tool requires review, as not everyone presenting always requires analgesia within 30mins, but because assessment and prior analgesia is currently inadequately documented, this is difficult to quantify.

What can we do to reduce delay in prescription and raise the profile of SCD management?

Action plan:

	Adult Plan	By whom by when	Done
1.	Contact triage, email data and outline a plan: • Assessing nurses to take more detailed assessment	SH, 14/7/2019	Yes
	of pain, analgesia use: drug, time, dose; length of crisis		
	 Triage to contact Haem SPR to request pre- 		
	prescription of appropriate first dose analgesia before patient arrives.		
	Plan meeting with triage in Sept	SH,14/7/19	Yes
	 To review data and co-develop plan. 		
	 Review criteria of 'chest pain' referral to ED 		
	 Review possibility of haem SpR prescribing first dose 		
	when patients need to present to the ED and that this is handed over the ED staff		
	Promote further teaching for triage re SCD management	SH, , July 19	Awaiting
			triage response
	Advise SpR's of pre-prescription plan	NR, new and existing SpR's 9/19	
	Continue: ward case based teaching, at new starter	SH/NR ongoing	Ongoing
	orientation, new SHO induction(haem), new SpR induction(haem)		
2	Develop SCD specific assessment tool for joint use across	SH/LM	
	adults and paedes?	Oct 19	
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