NORTH WEST TB COHORT AUDIT

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THE TB SUMMIT

TB is increasing. Let's make the North West TB free.

The Data Collection Form

Regional TB Audit Presentation Form (v13)

1. Patient details

Date form completed:	Case manager: *«CaseManager»*	
Clinic: *«Hospital»*		
PHE Centre: *«HPU»*	PCT: *«PCT»*	
ETS no: *«Id»*	Date of notification: *«CaseReportDate»*	Patient occupation: *«Occupation»*
Age: *«Age»*	Sex: *«Sex»*	Ethnic group: *«EthnicGroup»*
UK born: *«UKBorn»*	Country of birth: *«BirthCountry»*	Entered UK (year): *«UKEntryYear»*
Referred to TB service by: Select response ±	Date 1st seen by team initiating treatment:	Date 1st seen by TB nurse:
Date treatment commenced: «StartOfTreatment»		

2. Clinical details

Site of disease: Click here to enter site of disease.	Pulmonary infection: *«SitePulmonary»*	Previous BCG: *«BcgVaccinated»*
Spontaneous sputum smear status: Select response	Type of sputum: Select response	Smear status (other than spontaneous sputum): Click here to enter smear status
CXR / chest CT at diagnosis: Select response	Culture at any site: Select response	Culture sensitivities: Select response
PCR resistance done: Select response	Histological diagnosis: ☐	Empirical treatment: ☐
HIV test offered: «HIVTesting»	Outcome of HIV test: Select response	Year of test:

3. Risk factors requiring Enhanced Case Management

Standardized Risk Assessment completed: ☐	Enhanced Case Management: Select response *(See guidance notes)*	
Problem alcohol use: *«AlcoholUse»*	Unstable housing: *«Homeless»*	Problem drug use: *«DrugUse»*
Previous TB diagnosis: *«PreviouslyDiagnosed»*	Imprisonment: *«Prison»*	Mental health: ☐
Clinically complex: ☐	MDR: ☐	Loaded onto BTS MDR website: ☐
Non-adherence: ☐	Gipsy / traveller: ☐	Hard to reach group: ☐
Language barrier: ☐	Child/adult protection issues: ☐	
Other: Click here to enter details.		

4. Treatment plan

Self administered treatment: ☐ *(Including treatment administered by parent/carer/family member)*		Treatment as inpatient: ☐
Weekly supervised: ☐	Tablet count: ☐	Urine test: ☐
DOT required: ☐	DOT from start of treatment: ☐	% doses observed:
DOT offered: ☐	If not from Rx start, DOT started:	% doses self-administered:
DOT refused: ☐	No. of weeks on DOT:	% doses missed:

5. Treatment outcome at time of cohort

Post-mortem diagnosis: «PostMortemDiagnosis»	Completed treatment: Select response (If did not, ➔)	Reason for non completion: Click here to enter details.
If still on TB medications: no. of completed weeks treatment	and likely to complete within Select response (time from treatment start date)	
Lost to follow up: ☐	If lost to FU, actions taken: Click here to enter details.	
Planned treatment out of country: ☐	Transferred out within UK: ☐	

6. Contact screening
DO NOT COMPLETE if this case has been identified through contact tracing, and contact tracing details are a duplication of data from the index case.

		Contacts screened by clinic		Contacts referred elsewhere		Notes from ETS:
		(adult)	(child)	(adult)	(child)	*«Comments»*
Identified:						
Assessment completed:						
Still under investigation:						
No. with active disease:						
No. with LTBI:						
No. started LTBI Rx:						
No. completed LTBI treatment:						
Discontinued LTBI treatment due to:	Adverse FX:					
	Death:					
	Moved:					
	Refused:					

If any contact was a previous TB case (adequately treated), record ETS numbers: Click here to enter details.

Is the patient part of a cluster? ☐	(if yes, ➔)	Cluster ID: Enter cluster ID.	
HPU incident meeting held? ☐	(if yes, ➔)	HPZone No: Enter HPZone number.	

Space for additional notes:
Click here to enter any further details.

Some fields are pre-populated from ETS Data

Some fields have drop down option boxes

Select response
Fully sensitive
INH resistant
INH cluster
Rifampicin resistant
Ethambutol resistant
Pyrazinamide resistant
MDR
Not known

Some fields are free text

Introduction

In the last decade there has been a 28% increase in the incidence of Tuberculosis (TB) in the North West. The published data for 2010 showed that rates of TB fell in all Regions of the UK except for the North West, where they continued to rise (Banister, 2011).
TB diagnosis and treatment is delivered by 17 different TB nursing services across the North West. The teams are generally developed either as hospital based nurses outreaching into the community, or community nursing teams in reaching into the hospital. The geography, team structure and case load varies significantly across each of these services.
Cohort Audit has been introduced in the North West to provide a systematic quarterly review of the management of every case of TB, across all of the services within the Region. Where Cohort Audit has been used elsewhere, it has been shown to significantly improve TB control through delivering improvements in contact tracing, treatment completion rates and data accuracy (NCLDN, 2010).
The aim of Cohort Audit in the North West is to improve the management of cases and their contacts, thereby strengthening the prevention and control of TB. Specific objectives are:

1. Ensure the implementation of comprehensive case management procedures for all TB patients
2. Provide immediate analysis of treatment outcomes and contact tracing
3. Assess regional efforts compared to local and national TB control targets
4. Identify, track and follow up on important case management issues
5. Provide ongoing training and education for staff
6. Provide staff with a forum for open discussion.

Background

TB Cohort Audit (also referred to as 'Cohort Review') was developed in Kenya and rolled out in Tanzania, before being adopted in New York in the 1990s. In New York it was attributed as the key action that led to a 72% decrease in TB cases over a 12 year period (Munstiff, Ahuja, King, Udeagu, Dorsinville, Frieden & Fujiwara, 2006,).
Cohort Audit was introduced to the UK by the North Central London TB Service in June 2010. Evaluation after the first year of implementation showed measurable improvements in key outcomes including case management, contact tracing, reduction in patients lost to follow up and better treatment completion rates (NCLDN, May 2010)
In response to the increasing TB rates in the North West, the North West TB Summit was formed in January 2011. The Summit is a group of senior clinicians, Public Health experts and commissioners, who have come together to deliver a step change in TB prevention and control across the North West. Cohort Audit is the central tenet of the Summit's vision to "make the North West TB free".
In early 2012 two pivotal national guidance documents were published and added further weight to the initiative. The Royal College of Nursing *'Tuberculosis Case Management and Cohort Review: Guidance for health professionals'* and the National Institute for Health and Clinical Excellence (NICE) *'Identifying and managing tuberculosis among hard-to-reach groups'* both identified Cohort Audit as a key measure to successful prevention and control of TB.

Method

The Cohort Audit Steering Group was formed in mid-2011 consisting of a Clinical Chair, Regional Epidemiologist from the Health Protection Agency, Public Health professionals from the Strategic Health Authority, TB Specialist nurse representatives from each PCT cluster area and a Public Health Project Support Manager to take on the role of TB Cohort Coordinator. The role of the group was to develop the process for Cohort Audit and oversee the implementation of the first round of Reviews.

Footprints: Due to the geography of the North West and the large volume of cases the area was divided into four "footprints": Cumbria & Lancashire, Cheshire & Merseyside, North Manchester and South Manchester.

Cohort selection: A "cohort" of patients was selected so that the timing aligned with those who would be completing a standard 6-month course of treatment around the time of the Reviews

Outcome measures: A set of nine outcome measures were developed by the group to be used to measure the impact of Cohort Audit.

Data collection: An electronic data collection form was developed based upon the one used in North Central London and adapted to reflect the outcomes measures that had been chosen for the North West Audits. We then developed tools to extract all the data from the forms and automatically produce initial feedback charts at the end of each Audit meeting.

Pilot: A pilot Cohort Audit was conducted in November 2011 to test how well the process would work in practice. Two TB Nursing services took part in this pilot; Central Manchester Foundation Trust and Liverpool Community Health NHS Trust. Amendments to the process and data collection were made as a result.

Results

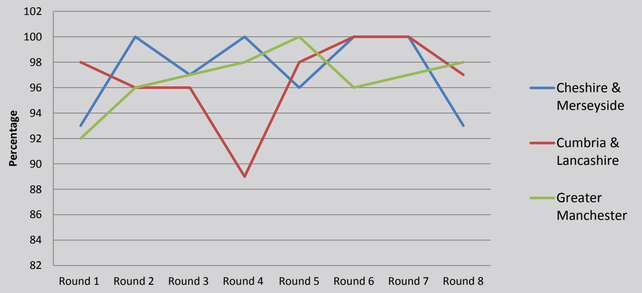
Over the two years 1,515 case were presented at cohort audit meetings. The results of the outcome measures are outlined in the graphs below.

Total Number of Cases Presented

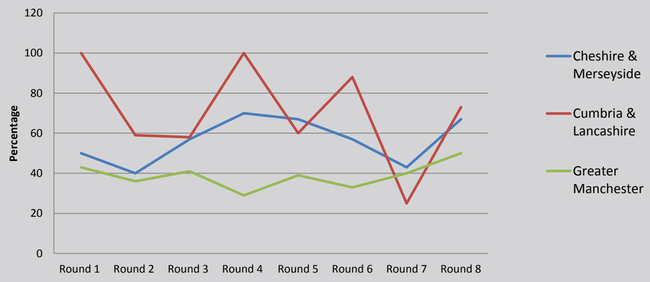
Footprint	Year 1	Year 2
Cheshire & Merseyside	93	116
Cumbria & Lancashire	188	198
North Manchester	237	243
South Manchester	229	211
Total	**747**	**768**

The 9 Audit Outcomes

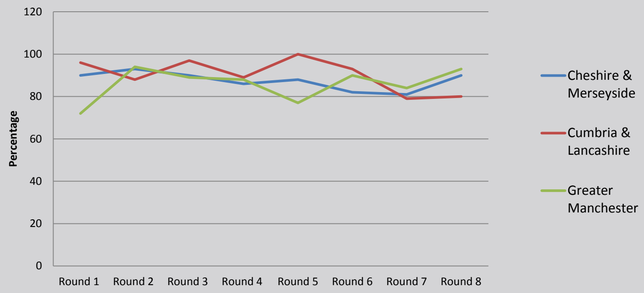
Outcome 1: 100% of cases have a standardised risk assessment carried out



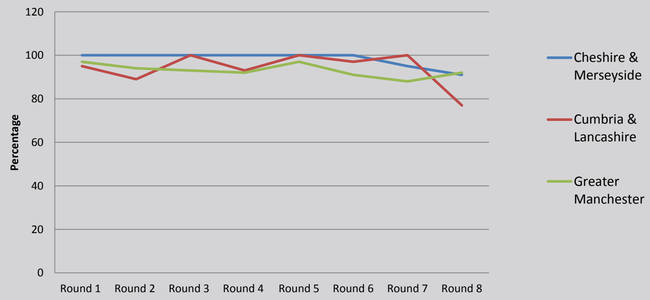
Outcome 2: 5 or more contacts identified for 100% of pulmonary/laryngeal smear positive cases



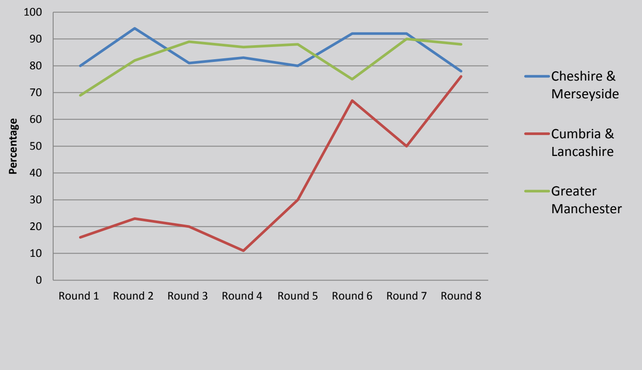
Outcome 3: 90% of contacts are assessed for pulmonary/ laryngeal smear positive cases



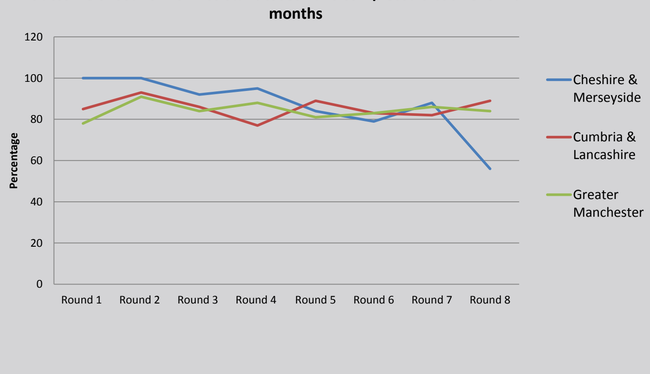
Outcome 4: 100% of child contacts are assessed (all sites of disease)



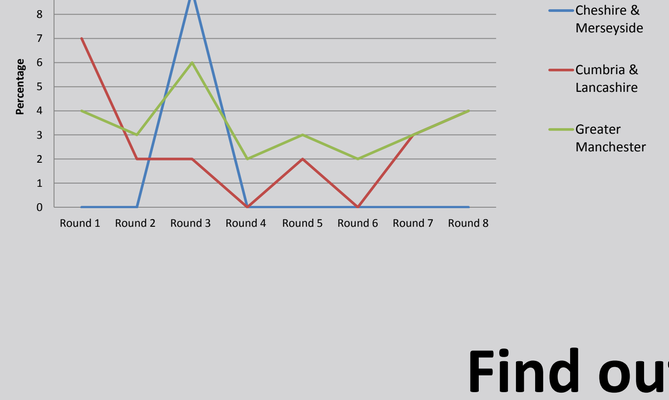
Outcome 5: 100% of cases are offered an HIV test



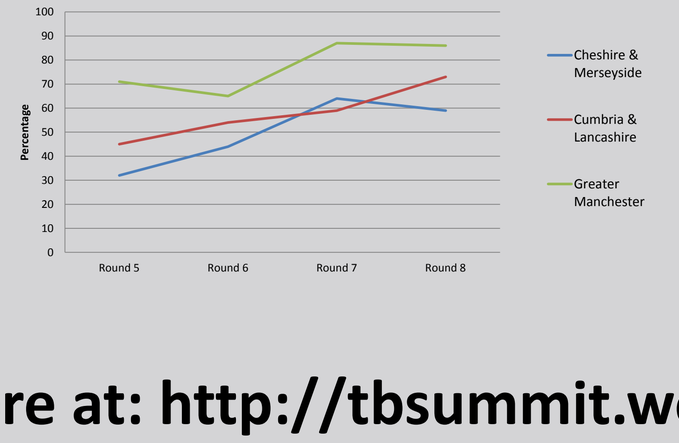
Outcome 6: 85% of non-resistant cases have completed treatment within 12 months



Outcome 7: Less than 2% of cases are lost to follow up



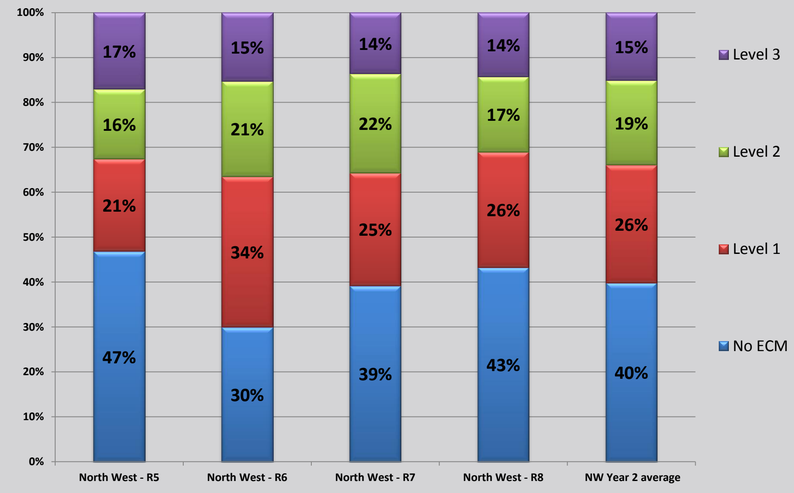
Outcome 8: 100% of cases are reported onto ETS within 5 working days of diagnosis *(Note: New outcome for year 2)*



Outcome 9: 100% of cases would be categorised with a level of ECM (Enhanced Case Management)
(NOTE: New outcome for year 2)

100% of cases were categorised

NW Average percentage of cases at each ECM level per Round in Year 2



CONCLUSIONS

Cohort Audit has provided a clinical governance framework for identifying areas for improvement in the management of TB. Particular areas where significant improvement has occurred are:

•Maintenance of high compliance with contact tracing
•Improvement in HIV testing
•Speed of entry on ETS

It had been identified after the first round of reviews that nursing staff were having difficulty with theoretical SCM and ECM definitions and applying them to actual clinical situations. This, together with a need to better understand the TB Nursing workforce capacity, led to the Steering Group developing 3 levels of ECM with example features and requiring all cases to be categorised .The results from the first year show a higher than expected level of cases requiring ECM.

TB Nurses also expressed concern at the amount of data which initially needed to be collected and the time required to do this. We have worked closely with ETS data collection and stream lined the information required and the amount which can be initially generated to the forms. We have also developed tools for automatically extracting all data from the forms and automatically producing initial feedback charts, so that attendees can have results presented at the end of the day.

We believe that the NW is unique in having cohort audit over such a large footprint and that this offers unique advantages in both the understanding of the hard data but also the less-measurable aspects of networking and education. We have recently commissioned a qualitative research evaluation of cohort audit and hope to publish this in the summer of 2014.

There are however continual challenges in cohort audit. For example, funding of the project across such a large geographic area and whilst TB Nursing is fully represented across the TB Services, we still need to encourage greater clinical engagement in some areas.

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