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RESEARCH ARTICLE

The role of nurses in national TB control programs: qualitative insights from TB cohort review in Wales

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ABSTRACT

Background: Tuberculosis (TB) cohort review was implemented nationally in Wales in 2012 as a systematic process for reviewing all notified cases of TB and evaluating outcomes to improve service delivery. Local TB teams collect outcome data, and then all notified cases are presented for discussion and expert feedback at a multi-disciplinary, all-Wales CR meeting.

Aims: Nurses are crucial in national TB control programs in low-incidence countries, carrying out resource-intensive activities such as contact tracing. This qualitative study aims to explore nurses' experiences of cohort review, identify successes, and explore barriers to improving TB care.

Methods: Questionnaires were developed using Microsoft Forms and distributed electronically to all nurses involved in TB care across Wales. They used a mixture of Likert-scale and open-ended questions. Qualitative data was analysed using reflexive thematic analysis.

Results: Questionnaire responses were collected from 19/23 (82.6%) nurses. Responses highlighted significant regional disparities in time and resource allocations to TB nursing teams. Thematic analysis results broadly aligned with the quantitative findings, identifying essential areas such as the lack of consultant support and the emotional impacts of presenting at meetings. Despite these challenges, nurses reported that the implementation of CR has improved TB care and fostered a stronger community of TB professionals across Wales.

Conclusion: These findings highlight the necessity of dedicated, well-resourced TB nursing teams in low-incidence countries to ensure the sustainability of high-quality TB care.

Introduction

Tuberculosis (TB) control in low-incidence countries such as Wales presents significant challenges as nations work toward achieving and maintaining elimination targets. TB cases are often complex because many of those at most significant risk belong to marginalised populations who face barriers to healthcare access[1]. These include individuals experiencing homelessness, people with substance use disorders, incarcerated individuals, and migrants or asylum seekers from high-incidence countries[2]. Managing these cases, therefore, requires significant input from multidisciplinary teams and imposes a substantial administrative and resource burden. The national TB cohort review (CR) program was implemented nationally in Wales in 2012 as a framework for addressing these challenges. This was part of a strategic approach to improve care coordination, enhance patient outcomes, and strengthen epidemiological surveillance nationwide.

Cohort review is a systematic process of case review and quality assurance. It involves the regular multidisciplinary discussion of all notified cases of active TB in Wales. Meetings involve all local TB teams based in six of Wales' seven health boards and are attended by consultant physicians, TB clinical nurse specialists or respiratory nurses, public health professionals, and an external TB expert. Nurses typically present cases, with subsequent feedback on clinical case management and implications for the broader epidemiological context of TB in Wales. As nurses are central to the CR process, their experience and insights are vital to continue improving the service.

A qualitative study conducted by Wallis et al. (2016) investigated the experiences of healthcare professionals in TB cohort audit (TBCA) in England, a low-incidence setting. The study highlighted the significance of multidisciplinary collaboration and the development of a "community of practice" to enhance TB care[3]. Building on these findings, our study aims to examine the specific challenges faced by TB nurses in Wales, given that differences in resource availability and geographic contexts may affect their experiences of care delivery. Literature on national TB control strategies highlights the necessity of providing adequate training, staffing, and support for nurses, particularly in low-incidence countries. A lack of resources and varying levels of support can have a substantial impact on nurses' ability to effectively perform their duties.

This study examines the experiences of nurses involved in TB CR in Wales, highlighting critical challenges such as resource allocation, time management, and professional support. By understanding these challenges, we aim to inform strategies to strengthen TB control programs, particularly in Wales and comparable low-incidence settings.

Methods

We followed the Standards for Reporting Qualitative Research (SRQR) guidelines when reporting this study[4]. In 2024, questionnaires were distributed to all nurses involved in TB care across Wales. This included clinical nurse specialists (CNS) and respiratory nurses with TB responsibilities. Local TB teams are based in six of Wales's seven health boards (HBs). In the remaining HB without any major hospitals, patients with complex problems such as TB are managed in other Welsh HBs or England. Given this small cohort, total population sampling was used to ensure that the perspectives of as many nurses as possible were captured[5].

This study followed a constructivist paradigm, using a narrative approach to explore the experiences of nurses involved in CR[6]. The questionnaires were developed using Microsoft (MS) Forms and included Likert scale questions and open-ended responses. To ensure clarity and relevance, pilot testing was conducted by sending the questionnaire to one nurse and a consultant physician involved in TB care[7]. Nurses were given six weeks to respond, and a reminder email was sent to non-responders after two weeks. All responses were anonymised to ensure confidentiality.

The primary researchers maintain professional relationships with many TB nurses across Wales.

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While this may have offered advantages such as ease of access to participants and a deeper understanding of the clinical context, it also raises the possibility of bias[8]. Anonymisation partially mitigated this.

A mixed-methods approach was used for data analysis[9]. Data was manually transcribed from MS Forms to an MS Excel file for analysis. Quantitative data from Likert scale responses were analysed descriptively. The qualitative data, derived from open-ended responses, underwent Reflexive Thematic Analysis (RTA) following Braun and Clarke's approach.[10,11] This process involved several steps:

1. Familiarisation: researchers (TDB, YH, SMB) familiarised themselves with the responses by repeatedly reading the data to understand key ideas and initial impressions.
2. Initial coding: open-ended responses were systematically coded, with descriptive codes assigned to significant points and recurring ideas.
3. Theme development: codes were reviewed and grouped into potential themes that captured broader patterns across the dataset. Themes and sub-themes were refined iteratively to ensure they reflected the nuances in nurses' experiences.
4. Review and refinement: themes were continuously refined to ensure coherence, and some were restructured or combined as the analysis progressed.
5. Defining and naming themes: each theme was defined to encapsulate the key insights it represented, ensuring that the final themes accurately depicted the experiences and challenges of nurses in TB CR.

RTA was chosen for its flexibility in exploring nuanced, context-specific insights into TB nurses' experiences. This approach allowed the researchers to engage reflexively with the data, particularly capturing anticipated and emergent themes, which aligned well with the study's qualitative focus[12,13].

To enhance the trustworthiness of the analysis, a member-checking process was undertaken[14]. One of the authors (YH), a TB nurse and participant in the study, reviewed a summary of the findings and provided feedback. This feedback was used to refine the analysis and ensure that the themes accurately represented the experiences and perspectives of TB nurses involved in CR. This step contributed to the credibility of the findings by attempting to align the analysis with participants' intended meanings. As a participant in the study however, this had the potential to introduce bias.

This study was undertaken as a service evaluation, and therefore, ethical approval was not required after considering the Health Research Authority decision-making tool (https://www.hra-decisiontools.org.uk/research/result7.html). Participants were at no risk, and confidentiality was maintained throughout the study.

Results

There are twenty-three nurses involved in TB care across Wales, and 19 responded to the questionnaire (82.6% response rate). Of these, four (17.4%) were TB CNS; the remainder worked primarily as respiratory nurses. Table 1 presents the distribution of respondents across the six included HBs.

Table 1: Distribution of nurses who responded to the questionnaire across health boards in Wales and time allocated each week for TB-specific work

Health Board	No. of respondents	1 Day or Less	2 Days	3 Days	4 Days	5 Days
1	1	0	0	1	0	0
2	5	4	0	1	0	0
3	3	0	0	0	0	3
4	6	6	0	0	0	0
5	1	0	0	0	0	1
6	3	0	1	2	0	0
Total (%)	19 (100.0)	10 (52.6)	1 (5.3)	4 (21.1)	0 (0.0)	4 (21.1)

Abbreviations: TB = tuberculosis

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Most respondents reported positive effects of CR on communication and collaboration. As shown in figure 1, 12/19 (63.2%) agreed or strongly agreed that CR improved communication within TB teams, and 16/19 (84.2%) felt or strongly felt that it improved communication across Wales. Despite these benefits, there was notable variability in responses, with some indicating mixed experiences.

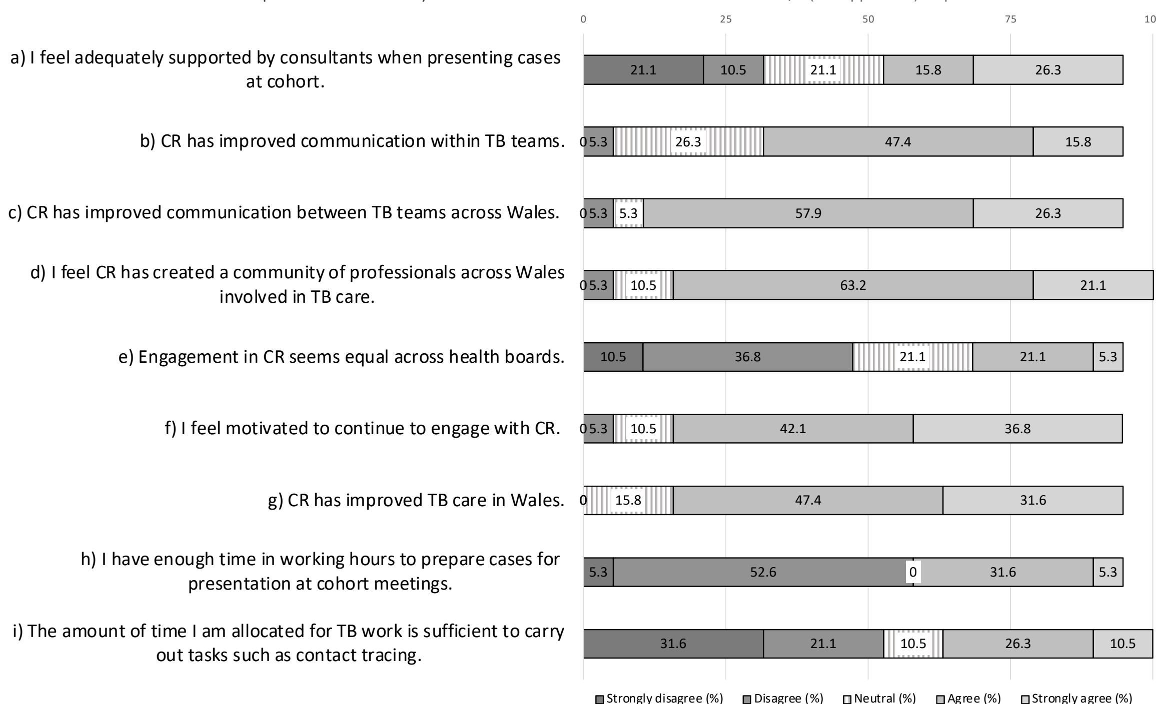

Figure 1: Nurses' perceptions of the impact of cohort review on TB care in Wales
Neutral responses are indicated by horizontal lined boxes. Bars below 100% indicate N/A (not applicable) responses.

Figure 2 highlights that time constraints and patient communication are critical barriers to effective contact tracing. Some respondents, 11/19 (57.9%), agreed or strongly agreed that limited staffing hinders patient care, but only 9/19 (47.3%) viewed time constraints as a significant challenge. A further 12/19 (63.2%) felt that case discussion at CR had led to more individualised care.

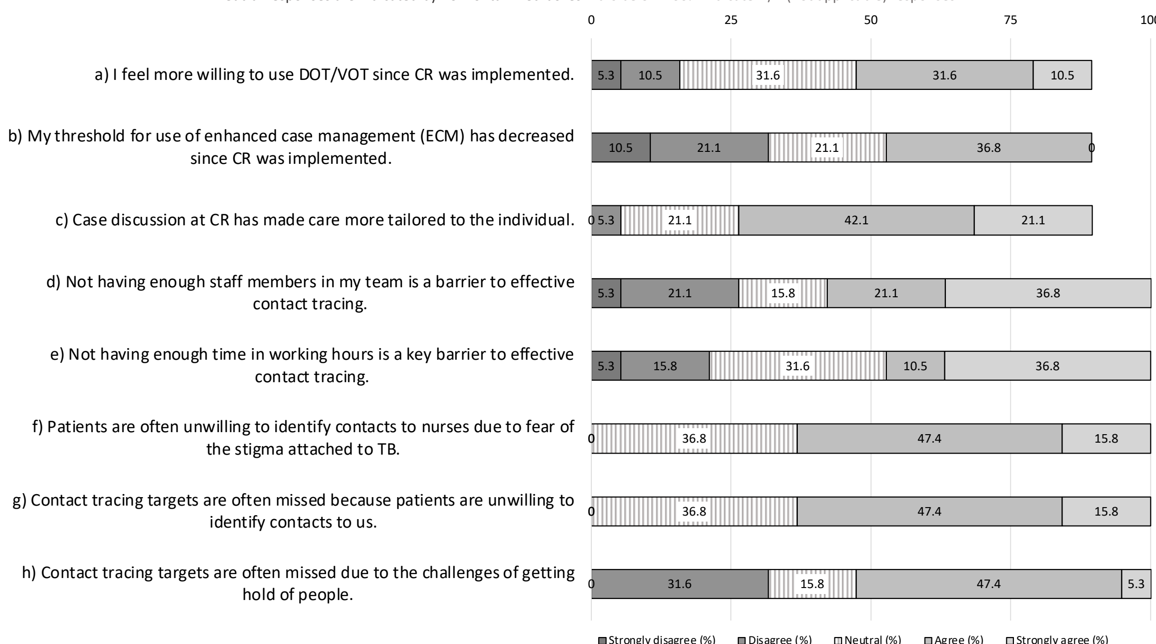

Figure 2: Nurses' perceptions of the impact of cohort review on outcomes and contact tracing
Neutral responses are indicated by horizontal lined boxes. Bars below 100% indicate N/A (not applicable) responses.

The full results of the RTA are shown in table 2. 'R' refers to responses rather than respondents. There were 34 open-ended responses in total (R1 – R34). The initial thematic analysis, including all responses to open-ended questions, can be found in supplementary tables 1a and 1b. A simplified schematic of the main themes and sub-themes involved in the analysis is shown in supplementary figure 1. The results reveal a significant thematic overlap between the quantitative and qualitative data, particularly around time and resource constraints as barriers to effective TB care. Time limitations (A3) and staffing shortages (A1.1) were consistently highlighted by respondents as key obstacles. Furthermore, the need for consultant support during case presentations (B1.1 and B1.2) was frequently mentioned, with nurses expressing the desire for more direct support in presenting cases where consultants made clinical decisions.

Table 2: Themes, Codes, and Illustrative Quotes from Reflexive Thematic Analysis

Refined theme	Refined sub-theme	Code	Description	Example quote
Resource and workload challenges	Staffing shortages	A1.1: Understaffed	TB nursing teams understaffed for volume of workload.	"Clinic availability/appropriate setting to see people in a timely manor, resource and time to chase those who do not attend/send letters etc/investigate/interrogate." (R22)
		A1.2: No dedicated TB team	HBs need dedicated TB staff to maintain high-quality care.	"Each health board needs 1 dedicated TB team to provide continuity and care." (R22)
	Administrative burden	A2: Heavy administrative burden	High administrative workload involved with TB work	"New to TB. The forms are lengthy. There is a heavy burden of administration." (R30)
	Time constraints	A3: Limited time for TB work	Limited time to prepare for cohort review and perform other TB-related tasks.	"Time is a significant issue. TB work is carried out when we have 5 mins!" (R20)
	Workload pressure	A4: Managing TB work in addition to other roles	High workload pressures due to handling multiple responsibilities alongside TB management.	"TB work... is managed as part of our other respiratory work demands." (R31)
Colleague support	Consultant support	B1.1: Consultant support when presenting cases	Lack of direct support when presenting cases where clinical decisions were made by consultants.	"Consultants make the decisions, but nurses have to present and explain." (R9)
		B1.2: Consultant support with clinical care	Lack of consultant support with TB clinical case management	"We do not have a dedicated Consultant who leads on TB, I can ask for support and advise but none of the consultants have time within their working week to meet on a weekly basis or attend the CR." (R34)
	Team presentation	B2: Team presentation with consultant	Cases should be presented at CR as a team with consultant support	"Consultant to be present... presented as a team." (R17)
Communication and collaboration	Interprofessional collaboration	C1: Communication with health protection teams	Need for regular communication with external health protection teams for case reviews.	"Encourage regular case reviews with health protection teams." (R25)
	Questioning in case reviews	C2: More open questioning during case reviews	Some nurses felt that questioning was less constructive and too critical at CR meetings	"The manner in which questions are asked can be more of a critique than a discussion." (R6)
Training and professional development	Lack of experience	D1: Inexperience of non-specialist staff	Some nurses who are not TB specialists reported relative lack of experience with TB care and CR.	"Knowledge and time is limited but we try our best." (R31)
	Knowledge enhancement	D2: Need for staff training and education	Additional professional development opportunities needed for new or less experienced staff.	"Would appreciate education sessions." (R29)
Challenges in contact tracing	Limited resources	E1: Limited resources for contact tracing	Insufficient resources to effectively carry out contact tracing.	"Limited resources for contact tracing." (R19)
	Patient barriers	E2: Difficulty obtaining patient information	Difficulty in gathering necessary information from patients.	"Patients sometimes working illegally and not keen to give out information." (R23)
Emotional impact	Presentation anxiety	F1: Anxiety from presenting at meetings	Feelings of anxiety related to case presentation and subsequent questioning	"Mainly surrounding the anxiety of presenting/ public speaking." (R1)
	Meetings intimidating	F2: Intimidated by meetings	Ffinding presenting at CR meetings intimidating.	"I find the CR very intimidating... it is very clinician driven." (R2)
	Stress from high workload	F3: Feeling overwhelmed	Stress and frustration due to the high administrative and clinical workload.	"Case work/load... is extremely time consuming and managed (or not) as a part of our other respiratory work demands." (R31)
Positive perceptions of cohort review	Supportive learning environment	G1: Supportive environment	Some respondents appreciate the supportive and collaborative nature of cohort reviews.	"I find the group very supportive and consider it a learning opportunity." (R11)
	Benefits to patient care	G2: Maintain standards of care	CR plays a role in maintaining standards of care, which is beneficial to patients.	"Cohort helps us manage patients... it's nice to have some support." (R31)
	Professional growth	G3: Positive learning experience	Nurses feel that cohort review offers valuable learning and growth opportunities.	"[CR]...helps to ensure standards of care." (R11)

Note: 'R' refers to responses rather than respondents. **Abbreviations:** TB = tuberculosis; CR = cohort review.

Discussion

TB control programs in low-incidence countries have made progress in reducing TB incidence over recent decades, though the rate of decline has recently slowed in many areas.[15] Nurses, who undertake most of the work associated with TB care alongside health protection teams, are central to the success of these programs. This study highlights priority action areas, focussing on regional disparities, time pressures, and the evolving role of nurses in TB CR in Wales. It has implications for similar low-incidence settings.

Most respondents in this study acknowledged that TB CR had improved TB care in Wales and enhanced communication within and between teams (G1, G2). The process of CR was also seen as a positive learning experience (G3). However, the disparities in resource allocation, staffing, and time devoted to TB-specific care across HBs remain significant (A1.1, A3). While some HBs have dedicated nurses, others do not, and nurses are often required to undertake TB work in addition to their regular duties in respiratory medicine (A4). Several respondents highlighted the need for dedicated TB teams in all HBs (A1.2). Without dedicated TB teams, nurses are stretched thin, leading to variability in the quality of care. This is particularly important given the complexity of TB case management, where continuity and dedicated time are essential for successful outcomes[16].

The resource and time constraints nurses report have broader implications for the effectiveness of TB control programs[17,18]. The frustration voiced by nurses over inadequate time allocation highlights the need for HBs to reassess how TB nursing roles are structured and supported. Ensuring that nurses have sufficient time to perform TB-related tasks enhances the quality of care. It also improves the effectiveness of contact tracing, which is critical for preventing outbreaks in low-incidence settings and arresting community transmission. This is a crucial aspect of many elimination strategies[19]. Compounding these challenges, the patient stigma around TB further hinders contact tracing, as patients are often reluctant to identify contacts, making it even more essential that nurses are given the time and resources needed to build trust and overcome these barriers (E2)[20].

Moreover, consultants' lack of consistent support during CR meetings was a recurring theme (B1.1, B1.2). While nurses are responsible for much of the day-to-day management of TB cases, the critical clinical decisions ultimately rest with consultants. When coupled with time pressures and inadequate preparation, this dynamic can leave nurses feeling unsupported and potentially increase anxiety when presenting (F1, F2). To address this, there is a need for stronger collaboration between nurses and consultants, with consultants providing support for nurses presenting shared cases, thus ensuring that nurses feel more confident in presenting cases (F1).[21,22] CR meetings offer an opportunity for continuous learning and professional development, but this is greatly helped by supportive consultant colleagues (D1, D2)[23].

The broader context of TB care in Wales reflects the struggles faced by many low-incidence countries in maintaining political and financial support for TB programs. As the incidence of TB declines, there is a risk of reduced commitment to these programs, a concept known as "Brown's Law"[24,25]. This phenomenon, observed in other infectious disease control programs, highlights the danger of complacency. For TB control efforts to succeed in the long term, sustained investment and political will are essential, even as the disease becomes rarer[26,27]. The situation is further complicated by the UK National Health Service (NHS) context, where chronic underfunding has led to healthcare staff increasingly experiencing burnout due to rising workloads and resource constraints. This was particularly evident during the COVID-19 pandemic[28]. This overburdened system makes it more difficult for healthcare workers to dedicate time and attention to TB care. Without sufficient investment, the risk of staff burnout could further erode the quality of care provided[29,30]. The resurgence of diseases like syphilis, after political

support for active case finding waned, serves as a cautionary example of what could happen if TB control programs are not maintained[24].

There are several limitations to this study. Firstly, the sample size is small, which may limit generalisability to other settings, particularly countries with larger populations or different healthcare systems. Further, primary researchers' professional relationships with study participants may have influenced responses, potentially leading to participants responding in a manner that they felt aligned with research expectations. This seems unlikely, though, as all responses were anonymous, and many respondents were candid in their open-ended feedback. Moreover, researchers were not present at the time of data collection.

Furthermore, while a study participant was involved in the RTA's member-checking process, the research team felt that the value of having a nurse involved with TB care in Wales verify the identified themes outweighed the potential for bias. Given Wales' small size and limited number of TB staff, this situation was challenging to avoid. Including an external reviewer may have reduced this bias, but it could have compromised the depth of understanding of the CR process and the nuances of TB care in Wales.

The reflexive approach to analysis allowed us to explore sensitive themes, such as the need for consultant support, with empathy and respect for the challenges described by participants. By recognising the power dynamics and pressures faced in CR meetings, we could delve into these issues in a way that remained mindful of nurses' experiences, enhancing the depth of the analysis and supporting a respectful interpretation of the data. While this reflexive stance facilitated a deeper understanding of the data, it may have also emphasised specific themes, such as time constraints and staffing shortages, reflecting the researchers' professional awareness of these issues. Throughout the RTA process, we remained attentive to our own experiences and perspectives within the TB care setting, aiming to provide a nuanced understanding of participants' experiences while acknowledging the potential influence of our perspectives on the analysis.

Therefore, our findings highlight three priority action areas for enhancing TB care in Wales and other low-incidence countries with sufficient resources. First, local health authorities should have dedicated nursing teams. The quality and consistency of TB case management could be improved by ensuring that nurses can focus exclusively on TB care without competing responsibilities. Second, consultants should be present at CR meetings to provide support. This will help build confidence among staff, ensure better decision-making, and strengthen the overall collaborative dynamic of CR. Finally, offering more targeted and frequent training to TB nurses – an actionable intervention now that doesn't require significant resources – could empower staff when handling complex cases. Addressing these priorities requires immediate, practical actions and sustained investment in resources and staffing to create a resilient TB care system.

Conclusion

In this study, we identified several critical challenges faced by the national TB control program in Wales, particularly concerning resource allocation, staffing and consultant support. Our findings emphasise nurses' vital contributions to the success of TB CR and broader TB control efforts. We have suggested priority areas for health services to enhance TB care, emphasising the need for dedicated nursing teams. Notably, despite the barriers identified, nurses reported that TB CR has positively impacted TB care in Wales, and they remain motivated to continue their involvement in the program. These findings are relevant to Wales and offer valuable insights that can be applied to other low-incidence countries.

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Conflict of Interest Statement:

The authors declare no conflicts of interest.

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Supplementary materials

Supplementary table 1a: Initial thematic coding of responses R1 - R17

Response ID	Excerpt	Code	Theme
R1	Mainly surrounding the anxiety of presenting/ public speaking	Emotional impact of meetings	Anxiety
R2	i find the CR very **intimidating**, i feel at times the cases are challenged and it is the nurses that are questioned with regard to management and treatment plans that is poorly directed. **Maybe the doctors should present**. It is very clinician driven and **not particually an open reflective session.**	Emotional impact of meetings, Better consultant support, More open communication	Intimidating, Lack of support, Communication.
R3	Limited **time** to prep for meetings	Time constraints	Time
R4	**New** to disease area	Lack of experience	Inexperience
R5	**Time** to prepare. Time to attend. Feel a little **intimidated** (it's not the only thing we do so **knowledge base** is not as **up to date** as others in the group)	Emotional impact of meetings, Time constraints, Lack of experience, Need for training/teaching	Intimidating, Time, Inexperience, Training and development
R6	When the cohort reviews initially started I carried the patient case presentations with no problem other than a **personal anxiety** associated with presentation. I now feel the **presentations are more challenging** in terms of the queries generated due the presentation and how the **manner in which questions around the queries are asked.**	Emotional impact of meetings, More open communication, How questions are asked	Anxiety, Communication
R7	I have not presented at cohort to date as I am **new to TB** and have only recently taking over a colleagues post. When my colleague was presenting at cohort, their concerns were around medical questions asked around the cases which they were **unable to answer and would require a consultant**	Lack of experience, Need for training/teaching, Lack of consultant support, More open communication, Nurses defending clinical decisions made by consultants	Inexperience, Lack of support, Communication, Decision maker absence, Training and development
R8	I do not present at Cohort as i do not lead TB just **support the service if needed**	Lack of staff	Resources
R9	If the **consultants presented** the cases	Better consultant support, Nurses defending clinical decisions made by consultants	Lack of support, Decision maker absence
R10	More **positive feedback** and recognition that we are **not a dedicated TB service** and have **limited time and resources** available to us.	Emotional impact of meetings, Need for dedicated nursing teams, More open communication, Lack of time, Lack of resources	Resource and staffing constrains, Time constraints, Communication, Emotional impact
R11	I find the group **very supportive** and consider it a **learning opportunity**. I feel that the review helps us to **ensure standards.**	Supportive environment, Positive learning experience, Opportunity for training, Maintain standards of ccare	Positive views of CR, Communication, Training and development, Standards of care
R12	To start with a personalised patient report to help build a picture of the patient for others and to remind myself.	Presentation format	Communication
R13	More **time to prep**. **Better IT. Supported by other MDT team members** (within my organisation)	Lack of time, Lack of support, Inadequate resources	Time constraints, Resource and staffing constraints, Consultant support
R14	If the queries generated were **explored by others to advice the presenter,** rather than the presenter being 'questioned'.	More open communication strategies, Intimidating meetings	Communication, Emotional impact of meetings
R15	The cohort review **forms are complicated**	CR forms are complicated	Burden of administative process
R16	important to have **consultants present** for clinical and so **cases are presented as a team**	Lack of consultant support, Present cases as a team	Need for consultant support
R17	**Consultant to be present**	Lack of consultant support, Present cases as a team	Need for consultant support

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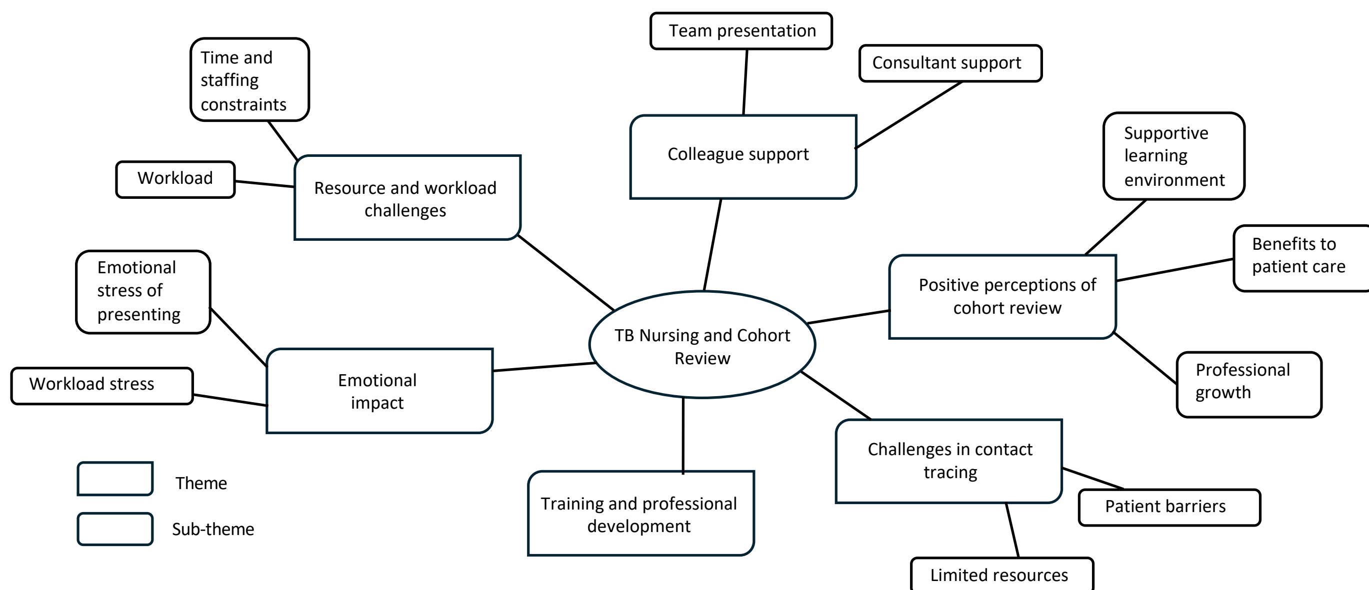
Supplementary table 1b: Initial thematic coding of responses R18 - R34

Response ID	Excerpt	Code	Theme
R18	Not applicable - but from previous experience a TB **consultant lead** in Cwm Taf (RGH) would be beneficial	Lack of consultant support, Need for dedicated TB staff	Resource and staffing constrainsts, Consultant support
R19	It is clear that **contact tracing is a challenge** and as TB work is sporadic this is **short staffed** when needed.	Challenges in contact tracing, Lack of staff	Resource and staffing constraints, Contact tracing
R20	**Time is a significant issue**. TB work is carried out when we have 5 mins !	Lack of time	Time constraints
R21	It is **not a funded service** in Swansea. So we do the TB work out of Asthma hours	Lack of staff, Unfunded TB service	Resource and staffing constraints
R22	**Clinic availability**/appropriate setting to see people in a timely manor, **resource and time** to chase those who do not attend/send letters etc/investigate/interrogate	Lack of space, lack of time, lack of resources, lack of resources	Resource and staffing constraints, Time constraints, Heavy administrative burden,
R23	Patients sometimes **working illegally** and not keen to give out information	Illegality a barrier to contact tracing	Challenges in contact tracing
R24	This can at times be difficult to address due to **lack of resources and time.**	Lack of resources, lack of tiem	Time constraints, Resource and staffing constraints
R25	would be good to **encourage regular case reviews with health protection teams** to make decisions on contact tracing and review of results. This is particularly important with smear positive cases.	Communication between teams	Interprofessional collaboration
R26	There is **no dedicated TB nurse** within our health board. Simple active TB cases and latent TB cases would be manageable but **if a high number of contact tracing would be required** it would have a **big impact on other colleagues workload**	Lack of staff, Need for dedicated TB staff, Burden of administration, Impacts other services	Resource and staffing constraints, Burden of administrative process, Impact on other services
R27	DOT & VOT **not accessible** in certain areas	Inadequate access to resources	Resource and staffing constraints
R28	Each health board **needs 1 dedicated TB team** to provide continuity and care. In my health board we have 3 sites and there is **little or no networking of cases.**	Poot communication between teams, Need for dedicated TB teams	Resource and staffing constraints, Interprofessional collaboration
R29	No TB Lead BCU WEST Would appreciate **education sessions Standard documentation** (for when seeing patients) this will help **improve standards**	Lack of experience, Need for teaching/training, Need to maintain standards of care	Training and development
R30	**New to TB**. The **forms are lengthy**. There is a **heavy burden of administration.**	Lack of experience, The forms are lengthy, Heavy burden of administration	Burden of administration, Training and development.
R31	TB care in the West is predominately nurse led. Case work/load can vary depending on the numbers but is **extremely time consuming** and managed (or not) **as a part of our other respiratory work demands. Knowledge and time is limited** but we try our best. We are **grateful to the TB MDT and Cohort** for **setting a standard of care** which certainly has helped us manage our patients and are **very good at answering any queries in a timely manor. It's nice to have some support.**	Lack of time, Heavy burden of administration, Lack of dedicated TB staff, Lack of time, Inexperience, Need for training and development, Positive experience of CR, Maintaining standards of care, Good communication at MDT	Burden of administration, Training and development, Positive experiences of CR, Time constraints, Resources and staffing constraints
R32	Difficult to compare prior to cohort review as i have **only worked in the TB service since cohort was in place**	Lack of experience	Traning and development
R33	This survey has been difficult to answer to my full ability, my colleague who was the lead on TB **has left the post**. The post has not been filled and between myself and my colleague we are **trying to do our best to review our cases** and monitor their bloods. I have taken over the role of TB and **this is all new to myself**. I have not been involved in the cohort review at present. We **do not have a dedicated Consultant** who leads on TB, I can ask for support and advise but **none of the consultants have time** within their working week to meet on a weekly basis **or attend the CR**	Lack of dedicated TB staff, Lack of experience, Better communication with consultants, Lack of consultant support, Lack of time, Emotioal impact of heavy admin burden	Resource and staffing constraints, Training and development, Consultant support, Time constraints, Interprofessional communication, Heavy administrative burden
R34	Answers very vague as my **involvement in TB has been very minimal** since being in post 11 years ago. I have attended cohort meetings and been involved in contact screening and active TB but only in a supportive role not as the case manager.	Lack of experience, Lack of dedicated TB staff	Resource and staffing constraints, Training and development



Supplementary figure 1: Simplified Thematic Map of Key Themes in Nurses' Experiences of TB Cohort Review in Wales.