Preparation for the Integrated Tuberculosis Services Strategic Planning Session
January 25, 2012
0830 - 1630
Harmony Court Redwood Square
1778 Pembina Highway
# TABLE OF CONTENTS

## Section 1

Welcome
- Dr. Catherine Cook, VP, Population and Aboriginal Health, WRHA ............................................ 5
- Directors, Integrated Tuberculosis (TB) Services .............................................................. 6

The Workbook
- Using this Workbook .................................................................................................................. 8
- Submitting Your Responses ....................................................................................................... 8
- How Your Workbook Responses Will be Used ........................................................................ 9

The Event
- Goals of the Strategic Planning Event ...................................................................................... 10
- Agenda of Strategic Planning Day ............................................................................................ 11
- Use of Information from Strategic Planning Process ............................................................... 11
- Your Facilitators ....................................................................................................................... 12

## Section 2

Reflecting
- Tuberculosis Services: Yesterday and Today ........................................................................... 16
- Figure 1: Timeline of Tuberculosis Services in Manitoba ......................................................... 17
- A Note on Change .................................................................................................................... 18

Developing
- Integrated TB Services Care Spectrum - Conceptual Framework .......................................... 19
- Figure 2: Integrated TB Services Care Spectrum – Conceptual Framework ......................... 20
- Integrated TB Services Care Spectrum - Operational Framework ......................................... 21
- Figure 3: Integrated TB Services Care Spectrum – Operational Framework .......................... 21
- Care Spectrum Definitions ......................................................................................................... 23
- Integrated TB Services Vision and Mission ............................................................................. 24
- The 5 Elements of Directly Observed Therapy ......................................................................... 24
- The 6 Components of the Stop Tuberculosis Strategy ............................................................... 25
- Leadership Framework for System of Excellence ...................................................................... 26
- Figure 4: Framework for Leadership for Improvement .............................................................. 26

Considering
- Who Are the People with TB? ..................................................................................................... 28
- What are the Needs of People, Families and Communities with TB? ..................................... 29
- Figure 5: Conceptual Framework and Strategic Entry Points for Intervention ....................... 30
- What Do We Need to Do? Healthcare System Design .............................................................. 32
- Figure 6: The Components of Good Design (Bate and Robert) .............................................. 34
- Lessons Learned: The Veteran’s Hospital Administration ReDesign ....................................... 36
# Section 3

Appendices

<table>
<thead>
<tr>
<th>Appendix</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>WRHA Vision, Mission, Strategic Direction</td>
<td>39</td>
</tr>
<tr>
<td>WHO Patient Charter for TB Care</td>
<td>40</td>
</tr>
<tr>
<td>WHO International Standard for TB Care Report</td>
<td>42</td>
</tr>
<tr>
<td>Further Resources and Reading List (articles are separate files)</td>
<td>45</td>
</tr>
</tbody>
</table>

End Notes ............................................................................................................................................. 45
SECTION 1

Welcome
Dr. Catherine Cook, VP, Population and Aboriginal Health, WRHA
Dr. Pierre Plourde and Ms. Alison Bertram-Farough,
    Directors, Integrated Tuberculosis Services

The Workbook
    Using this Workbook
    Submitting Your Responses
    How Your Responses Will be Used

The Event
    Goals of the Strategic Planning Event
    Agenda of Strategic Planning Day
    Your Facilitators
    Use of Information from Strategic Planning Process
January 2012

Dear Integrated Tuberculosis Services Strategic Planning Participant:

I want to thank you for your involvement as we continue building on the existing expertise of those involved in TB care and to further develop Integrated Tuberculosis Services in the Winnipeg Health Region (WHR). This is a critical undertaking, as we continue working in a spirit of collaboration towards defining and developing a system of excellence in TB care. Key stakeholders and long-standing partnerships are even more critical, as we plan and take the next steps on the path to further integrating TB services in the WHR and linking across the province.

It is challenging work to design systems, perhaps more challenging to re-align them and work towards systems of excellence. We are continuing to build on a history of expertise as we develop the components of an integrated, inter-connected whole, which functions to provide exceptional care. An aim for this system is to motivate and inspire: those of us working in it as well as those individuals requiring tuberculosis care.

The vantage point from which we consider our healthcare systems has shifted in recent years. We recognize that quality care is more than just “clinical care”. Systems of excellence are designed to maximize resources while considering broader components such as the patient experience, care coordination, equity of access and the impact of determinants of health.

We will be continuing in the collaborative spirit of the excellent work done over the last several years as we consider what the person with tuberculosis, their families and communities need to live lives of improved health and wellness.

I invite you to be curious and visionary as we work together on this path of integrating tuberculosis services.

The following pages are designed to provide us with some common terms and ideas to build on existing expertise while considering developing new expertise to better meet the needs of people with TB, their families and communities.

I look forward to your contributions.

Dr. Catherine Cook, MD, MSc., CCFP, FCFP  
Vice President  
Population and Aboriginal Health
January 2012

Welcome to the Integrated TB Services Strategic Planning Event:

We are excited to reach this milestone with you: our first broad strategic planning session in the development of an Integrated TB Services system.

We want to start by recognizing the tremendous skill and collaborative effort that has resulted in resource sharing between First Nations Inuit Health, Manitoba Health and programs within the WRHA. Without this cooperative and collaborative effort we would not be gathering today as an integrated group focusing on the continued development of an integrated system of excellence for individuals with TB, their families and communities.

We want to extend our appreciation for all the hard work, sharing of knowledge and expertise and learning that has brought us to this stage of our development.

In the last 12 months, we, the stakeholders within Integrated TB Services, have focused on the areas of role clarification, building on existing practices to develop guidelines, protocols and support processes and working towards the development of a best practice strategy for providing TB care.

Specifically, our main achievements include:

- An Integrated TB Services Vision and Mission Statement
- Agreement on the Integrated TB Spectrum of Care – Conceptual and Operational Frameworks
- Definitions of care spectrum areas
- The establishment of Terms of Reference and well-functioning meetings for the Integrated TB Services Management; Integrated TB Services Oversight; and, Integrated TB Services Advisory Committees.
- The development of the Working and Task Group Structure to explore specific issues using a Project Charter approach
- Development and increased use of a standard template for Integrated TB Services Guidelines

A critical next step in designing a TB system of excellence is considering: what do people with TB really need during each phase of the care spectrum? We have pieces of the puzzle that are working well, developed over years of providing quality TB care, but we have heard during our work in the last year, that there are important pieces that could be better.
You will find in this Workbook literature from within and outside the TB sector. One of the 6 Components of the Stop TB Strategy urges us to adopt successful approaches from other fields and sectors and apply them to the delivery of TB services. There is much we can learn from other health sectors as well as other fields, and, as we couple that with the expertise within Integrated TB Services, we will build a system of excellence.

Thank you for your efforts with the development of the Integrated TB Services system. Our thanks too, to the small group facilitators, lending us their expertise on January 25th 2012 as we move forward.

Dr. Pierre Plourde  
Medical Director,  
Integrated Tuberculosis (TB) Services,  
WRHA

Ms. Alison Bertram-Farough  
Director,  
Integrated Tuberculosis (TB) Services,  
WRHA
This workbook has been prepared collaboratively with the Directors of Integrated Tuberculosis Services and Angela Chotka, the consultant retained for the Strategic Planning Process.

The Workbook has been designed to provide information, ideas and space for reflections and questioning. We thank you in advance for any time and effort you are able to dedicate to using this Workbook and preparing for the Integrated TB Services Strategic Planning Event. We encourage everyone invited to the event, including those unable to attend, to submit their responses so their perspectives and expertise can be factored into the ongoing development and integration of tuberculosis care in the Winnipeg Health Region.

Limited hard copies of the workbook will be available at the Strategic Planning Day Event.

Using this Workbook
We expect it will take 1-3 hours to review the material and consider the questions in this Workbook. Have either a hard copy of the Workbook or the document open in a window on your computer as you work through the online survey to respond to the questions.

Numerous articles are referenced throughout the Workbook. PDFs of the complete articles are attached as separate files and named Author_Abbreviated_Title. We have used the pdf page number rather than the journal page numbers in our references throughout the Workbook.

Submitting your Responses
There are 16 question cards throughout the Workbook. You are invited to submit your responses online at this Survey Monkey link: https://www.surveymonkey.com/s/X3DYNT2

If you have trouble with the link or completing the questions online, please contact Angela directly at angela@chotkaconsulting.ca or 204-770-2675 to make alternate arrangements.

Printing your Responses:
Before printing, check and ensure that the Print Background / Background Colors is checked in your print options.

**Internet Explorer:**
- In the browser go to the Internet Options and the Advanced tab.
- Under printing ensure Print Background Colors is checked.
- Save the settings.

**PC FireFox:**
- Click on the File prompt in the menu header and select Page Set Up.
• Under the **Format and Options** tab, check *Print Background (Colors & Images)*.
• Save the settings.

**Mac FireFox:**
• Click on the **File** prompt in the menu header, select *Print*. The *printing* prompt will open.
• With the *Appearance* options, make sure *Print Background Colors* is checked.

### How Will Your Workbook Responses be Used?

Individual responses will only be seen by the facilitator.

Information from your responses will be compiled thematically. These themes will be shared with the Directors of Integrated TB Services and used on an ongoing basis to inform the development of the Integrated TB Services strategic planning.

**Responses received by 0900 Monday, January 23, 2012 will be read and factored into the final plans for the Strategic Planning Event.**
THE EVENT

Goals of Strategic Planning Event

- To identify patient / family / community needs of those with TB through the care spectrum.
- To consider how the Integrated TB Services system meets those needs.
- To identify 5 – 7 key opportunities for progress and consider next steps.

Strategic Planning Day
January 25, 2012  0830 – 1630
Harmony Court Redwood Square – 1778 Pembina Highway

It’s an ambitious agenda, requiring focus and energy and a willingness to listen and learn together. You will be working hard and, we hope, having fun and knowing that important accomplishments are being made regarding the development and integration of TB care.

You are encouraged to dream, and to imagine what is possible rather than working only with “what is” as you approach this work. Envision the system you would like to build.
Location
Harmony Court Redwood Square
http://maps.google.ca/maps?q=1778+Pembina+Highway&hl=en&ll=49.827021,-97.12635&spn=0.067883,0.166512&client=firefox-a&hnear=1778+Pembina+Hwy,+Winnipeg,+Manitoba+R3T+3M3&gl=ca&t=m&z=13&vpsrc=6&iwloc=A

Parking
Parking is behind Harmony Court – Redwood Square. To access the Parking Lot, you must go south on Pembina and turn onto Adamar Road, at the Garbonzo’s Pizza / CanaInns Express / Area Nightclub Building. Drive to the Area Nightclub and turn left into the Parking Lot.

You will see a large wooden fence which is part of Harmony Court Redwood Square. Once you cross the fence, the side door (south door) to the facility will be open.
Strategic Planning Day Agenda

0830  Why are we here today?
      Dr. Catherine Cook, VP, Population and Aboriginal Health, WRHA

0900  Where are we heading?
      Dr. Pierre Plourde and Ms. Alison Bertram-Farough,
      Directors, Integrated TB Services, WRHA

0915  What does the patient need through the care spectrum?
      Participants (Facilitated Individual Station Work)

Noon  Lunch:  On Your Own (ie: CanadInns)

1315  Meeting the identified care spectrum needs?
      Participants (Facilitated Small Groups)

1430  Key Opportunity: Workplan Development
      Participants (Facilitated Small Groups)

1630  Closing
      Ms. Lori Lamont, VP, Chief Nursing Officer, WRHA

Reporting

Reporting from the Strategic Planning Day will be combined with the thematically-compiled Workbook responses. This information will be submitted to the Directors of Integrated TB Services who will bring it forward to Integrated TB Services Management, Oversight, and Advisory Committees as appropriate.
Your Facilitators

Angela Chotka, BA, MA
Angela consults on organizational development with a strong focus on how change affects people in organizations. Angela’s expertise is in developing both individual and organizational capacities, considering and openly discussing readiness for change and creating tools to assist with communication and processing. Angela’s preferred approach includes sharing and working with different levels in the organization to develop healthier team dynamics, more effective leadership and improvements in communication, problem-solving and decision-making.

She has applied her approach to designing and developing various initiatives to improve service delivery and through middle management skills development through training and individualized coaching. She has designed and collaborated on various bridging programs leading to credentials recognition for foreign-trained professionals and various workplace education initiatives.

Angela’s approach to facilitation focuses on engagement and draws on her experience, instinct, skills and comfort with change to create the best results for her clients.

Angela brings 5 years of experience with the Manitoba Renal Program (MRP) where her position involved supporting the MRP’s strategic development. Most recently, Angela has facilitated for Manitoba Labour and Immigration (Adult Language Training Service Providers Consultation), Manitoba Health (Spiritual Health Strategic Direction, H1N1 Tripartite Table Debrief), and numerous ongoing processes for the child welfare sector.

Ingrid Botting, PhD
Ingrid is currently the Director of Health Services Integration, Family Medicine/Primary Care Program. Ingrid is involved in leading the development of primary care renewal strategies and Primary Care Networks within the Winnipeg Health Region, in collaboration with many partners, including family physicians, health care providers, the provincial government, and communities. Her background is in research and evaluation, knowledge translation, and collaborative approaches to Program development. Most recently, Ingrid was involved in the development of Promoting Equity: a Knowledge to Action Handbook with Dr. Sarah Bowen of the University of Alberta School of Public Health, and Jeannine Roy, WRHA.

Kandice Léonard
Kandice Léonard is a Métis woman from Winnipeg. She is currently the new Director of Aboriginal Health Programs - Aboriginal Health Services with the Winnipeg Regional Health Authority.

Kandice has held the position of Executive Director for the Indigenous Physicians Association of Canada and previous to that the National Aboriginal Diabetes Association.
Michelle Meade, BPE, CSEP-CEP
Michelle has over 30 years working in the medical fitness community. Currently she is the manager of the WRHA Chronic Disease Collaborative working on regional chronic disease prevention and management strategies. Prior to coming to the WRHA, Michelle was the Director of Program at the Reh-Fit Centre where she was responsible for developing and implementing cardiac rehab and chronic disease programs well as adult health and fitness programs/services with an interdisciplinary team of professionals.

She has a strong background in project management, strategic planning, as well as significant experience in program planning for health promotion, primary prevention and chronic disease management.

With an undergraduate degree in the field of kinesiology, she is Certified Exercise Physiologist (CSEP), Clinical Exercise Specialist in Cardiac Rehabilitation (ACSM).

Margerit Roger, BA, MA
Margerit is an adult educator, facilitator and program planner who has worked in industry, labour, government and post-secondary environments to identify training needs and develop workshops, courses and programs that meet a variety of organizational and individual objectives. She has developed and delivered in-person, blended and online courses.

Currently working as an independent consultant, Margerit previously held positions as Coordinator of Red River College’s Learning Assistance Centre and Assessment Services, the Apprenticeship Branch’s Essential Skills Coordinator, and as Program Developer of the UFCW’s Adult Training Centre.

Annette Alix Roussin, BA, BSW, RSW
Annette is a member of the Berens River First Nation in Manitoba. Annette is currently the Interim Regional Director of the Aboriginal Health Programs, Winnipeg Regional Health Authority. Annette’s primary role has been program specialist and in this role has been pursuing opportunities to work towards increasing Aboriginal Health Programs participation in health and educational initiatives that support and enhance the overall health services and success and well being of the Aboriginal population in the greater Winnipeg area. Annette has co-lead the Mental Health Services and Aboriginal Peoples project that created several documents titled “The Culture of Well Being” a guide for consumers seeking mental health service/resources and also the “Culture of Well Being Tool kit”, a guide for mental health service providers. As program specialist Annette supports project endeavors within Aboriginal Health Programs with both internal and external stakeholders.

Dan Skwarchuk, B. Comm. (Hons), CGA, CHE
Dan is the Executive Director, Health Services Integration and Innovation with the Winnipeg Regional Health Authority. In this role he is responsible for planning, coordination, and integration of the many components of the health care system and broad-scale healthcare
improvement. He is also responsible for fostering, coordinating, and achieving innovation in the Winnipeg Health Region in the interest of delivering higher quality, improved outcomes, and a more sustainable health system. Dan has worked in healthcare for 23 years, and has volunteered on the Board of Directors of the Nor’West Community Health Centre for the past 14 years.

In addition to his degree in commerce and CGA designation, Dan has attained the Certified Health Executive designation with the Canada College of Health Leaders. Dan also completed a two-year fellowship with the Canada Health Services Research Foundation’s EXTRA Program with studies on improving home-based dialysis utilization through the use of evidence. Most recently, in 2011, he completed the Leadership Winnipeg Program offered by the Winnipeg Chamber of Commerce.

**Joanne Warkentin, BSc, MSc**

Joanne has been with the WRHA since 2002 and is currently the Director of Strategic Housing Initiatives. She holds a dual role in the Provincial Government as Team Lead with the Cross-Department Coordination Initiative which is a unit reporting to the departments of Health, Housing and Community Development, Family Services and Consumer Affairs and Healthy Living.

These positions focus on the development of alternative models of housing and health supports to assist vulnerable populations to remain in community settings. Key populations include frequent users of health services, mental health, homeless and seniors. Joanne’s work includes engagement across government departments and health sectors including acute care, community and long term care including strategic partnerships with community service providers.

Joanne has her Master’s Degree in Social Work and has a background in Geriatrics, Palliative Care, Mental Health, Population Health approaches and Health System Innovation. Joanne has been seconded into the Provincial Government since 2006 and was an advisor to The Minister of Health in 2006 & 2007 prior to beginning with CDCI in 2007.
SECTION 2

Reflecting:
   Tuberculosis Services: Yesterday and Today
   Figure 1: Timeline of Tuberculosis Services in Manitoba
   A Note on Change

Developing
   Integrated TB Services Care Spectrum - Conceptual Framework
   Figure 2: Integrated TB Services Care Spectrum – Conceptual Framework
   Integrated TB Services Care Spectrum - Operational Framework
   Figure 3: Integrated TB Services Care Spectrum – Operational Framework
   Care Spectrum Definitions
   Integrated TB Services Vision and Mission
   The 5 Elements of Directly Observed Therapy
   The 6 Components of the Stop Tuberculosis Strategy
   Leadership Framework for System of Excellence
   Figure 4: Framework for Leadership for Improvement

Considering
   Who Are the People with TB?
   What are the Needs of People, Families and Communities with TB?
   Figure 5: Conceptual Framework and Strategic Entry Points for Intervention
   What Do We Need to Do? Healthcare System Design
   Figure 6: The Components of Good Design (Bate and Robert)
TUBERCULOSIS SERVICES: YESTERDAY AND TODAY

Healthcare systems engaged in developing systems of excellence that coordinate care across sectors, jurisdictions and areas of specialty have widely accepted that the crucial area of focus is system-level integration¹. Care coordination, as described in Reducing Care Fragmentation: A Toolkit for Care Coordination² is a “set of activities that is needed to minimize the dangers of fragmentation (p 2).” Care coordination relies on integration at the system level, a different endeavour than adjusting a program by adding positions or re-allocating funds to priority areas – although these activities may be part of the change at a system level.

Research shows that communities that have the most success in coordination efforts have skilled care managers implementing individual-level interventions as well as effective leadership aligning key stakeholders of multiple systems. These systems can include acute care health facilities, long term care facilities, occupational and environmental safety and health, infection prevention and control, community health, primary health, public health, housing, mental health among others. (See Reducing Care Fragmentation: A Toolkit for Coordinating Care; Extreme Makeover: Transformation of the Veterans Health Care System; Partnering with Patients and Families to Design a Patient – and Family-Centred Health Care System and other resources.)

This is the type of shift – creating a system of excellence - we are pursuing with tuberculosis care in the Winnipeg Health Region and Manitoba. Prior to 2006, tuberculosis services in Manitoba were part of a highly centralized system, consistent with healthcare delivery models of the time.

Today, as the health care system finds the appropriate balance between centralized and decentralized services, the components of Integrated TB Services have to be properly designed and supported to facilitate quality care to people throughout Manitoba. As Reducing Care Fragmentation: A Toolkit for Care Coordination points out, “medical care is error-prone even when care is delivered by a single provider, (and) the opportunities for serious mishaps escalate when multiple providers are involved.” (p 2, Reducing Care Fragmentation)

The activites that form care coordination include ensuring that all care providers involved in a patient’s care share important clinical information and have clear, shared expectations about
their respective roles in care. It is also important to keep patients and families informed and to optimize their experience through transitions. There are many healthcare providers involved in providing TB care services in the Winnipeg Health Region and Manitoba, a list that is likely to grow as Integrated TB Services develops.

Care coordination is a challenging endeavour and as we develop the Integrated TB Services system, we will be ensuring that we learn from a growing body of innovative practices and care systems that will help us develop and sustain the elements associated with more effective care coordination.

A brief review of the evolution of TB services in Manitoba over the last few years is helpful. The timeline below outlines the recent history of TB services in Manitoba.

Figure 1. Timeline of Tuberculosis Services in Manitoba

<table>
<thead>
<tr>
<th>Pre 2006</th>
<th>2006</th>
<th>2008 November</th>
<th>2011 April</th>
</tr>
</thead>
<tbody>
<tr>
<td>Centralized model in Manitoba</td>
<td>WRHA and Burntwood RHA</td>
<td>WRHA assumed responsibility for supporting case and contact management by FNIHB for residents of First Nations communities under federal jurisdiction throughout Manitoba.</td>
<td>MB Health</td>
</tr>
<tr>
<td></td>
<td>Process begins to transfer responsibility for service delivery (case and contact management) to regional health authorities for regional residents.</td>
<td></td>
<td>- receives reports of laboratory-confirmed or clinical cases</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>- responsible for protocol and policy development</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>- responsible for surveillance including the Tuberculosis Registry</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>- responsible for funding RHA residents not under federal First Nations jurisdiction</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>WRHA assumes:</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>- consultation for case and contact management for all regional health authorities</td>
</tr>
</tbody>
</table>

Integrated TB Services Strategic Planning Workbook Final
A NOTE ON CHANGE

“If you’re finished changing, you’re finished” (Benjamin Franklin)

At the recent Health Innovations Conference (http://www.gov.mb.ca/health/mpan/conference.html) Dr. Kenneth Kizer, one of the primary architects of the system change to the Veterans’ Hospital Administration in the US, openly discussed that system redesign means substantial change. He noted that:

- Talking about change is easier than doing it.... achieving real change is hard work.
- Beginning change projects is easier than completing them and, if accomplished, sustaining the change may be even harder.
- Most change strategies are conceptually straightforward but fail in their implementation.
- The speed of change is almost always slower than expected or hoped for.
- Change is inherent to living, but the prospect of change is usually disconcerting and evokes fear.

Dr. Kizer outlined that most people are not afraid of change, but they are afraid of:

- The unknown; not knowing where they are going or what they are going to do,
- Loss of control, status, power, privilege or other things they have accumulated,
- Disappointment, embarrassment, humiliation, or failure.

1. Each of us will have different views of change. What needs to be in place to lessen our fears as we build the system of Integrated TB Services?
DEVELOPING

Conceptual and Operational Frameworks
Care Spectrum Definitions
Integrated TB Services Vision and Mission
5 Elements of DOTS
The 6 Components of Stop TB Strategy
Leadership Framework for System of Excellence

CONCEPTUAL FRAMEWORK

Consider the conceptual framework below (Figure 2) that we, Integrated TB Services, have developed over the last months. Overlapping layers characterize the spectrum: people with TB can move through a number of areas of the spectrum but in a non-linear manner. The core houses the clinical components while the outside circle is home to the supporting functions, required through the entire system and care journey.

Deliberately, these “supporting functions” are being made more obvious as we work together to build the system collaboratively. For any system to work well, these functions need to be considered, designed and developed to work in tandem with quality clinical care components. For our integrated and more dispersed model of care, we are making these functions more prominent and recognizing their fundamental role in the care that people with TB receive.
Figure 2. Integrated TB Services Care Spectrum - Conceptual Framework

1 TB Disease identification and management is the foremost priority area, based on Canadian and World Health Organization recommendations. Some cases of active TB disease are identified outside of a TB contact investigation, and others are identified during a TB contact investigation.

2 LTBI identification and management includes testing of recent contacts to infectious cases, as well as testing of individuals outside of a TB contact investigation (i.e., screening); e.g., individuals with HIV infection, immigrants, healthcare workers, etc.

3 TB contact investigations will identify individuals with active TB disease, LTBI, and also individuals who have neither condition.
OPERATIONAL FRAMEWORK

The operational framework has been developed to assist the Integrated TB Services system in organizing our work, communicating across and within clinical components and supporting functions. This framework will be regularly used with committee members and stakeholders to not only map our work but help us identify others that need to be involved in Integrated TB Services.

As Hargreaves et al write in *The Social Determinants of Tuberculosis: From Evidence to Action*¹, we are expecting the list of stakeholders to grow:

> Gaps still exist in our understanding of the extent to which socioeconomic determinants drive the current TB epidemic, the underlying processes linking socioeconomic determinants to TB, and how to best address these determinants.

> Key to success will be the capacity to design research in which different disciplines can develop a shared approach and common conceptual framework. A great deal will be learned as partnerships involving actors from within and beyond the health sector conduct rigorous evaluations of the impact of economic and development aid programs on TB control. (p 7)

Figure 3. Integrated TB Services Care Spectrum - Operational Framework
2. Does the conceptual framework (Fig 2) resonate with you? Why or why not?

3. Does the operational framework (Fig 3) resonate with you? Why or why not?
CARE SPECTRUM DEFINITIONS

Note: For the purpose of Integrated TB Services Strategic Planning references to person/patient/individual/client in documents and discussion are overlapping.

TB Disease Identification (Case finding and diagnosis)

Diagnosis of active TB disease (respiratory and non-respiratory) using symptom enquiry, diagnostic imaging (i.e., chest radiography, CT scan), microbiologic or histologic evaluation (i.e., sputum or other appropriate specimens for AFB smears and TB cultures, antimicrobial sensitivity testing, biopsy for histology), and occasionally tuberculin skin testing (in young children).

TB Disease Management (Intensive and Continuation)

Treatment of active TB disease (respiratory and non-respiratory) using a combination of antimycobacterial agents prescribed by a physician with expertise in TB (i.e., Chest Medicine or Infectious Diseases specialist) administered by enhanced Directly Observed Therapy (DOT) using a Collaborative Care model.

Contact Investigation and Management

Identification and prioritization of individuals exposed to active TB disease in order to initiate prompt assessment and treatment of contacts at highest risk of progression to active TB disease and in order to identify possible source TB case.

LTBI Finding/Diagnosis (including screening)

Diagnosis of latent TB infection by identifying and screening those at highest risk of having LTBI and of probable progression to active TB disease using tuberculin skin testing (TST) and/or interferon gamma release assays (IGRA).

LTBI Management

Treatment of LTBI (after exclusion of active TB disease) in those at highest risk of progressing to active TB disease using antimycobacterial agents prescribed by a healthcare practitioner (specialist, primary care physician or nurse practitioner) with expertise in the management of LTBI, administered as Directly Observed Preventative Therapy (DOPT) in select populations (i.e., children, on reserve First Nations communities).
Supporting Functions

Access to Diagnostics
Facilitation of timely and efficient access to reliable diagnostic tests such as chest radiography, AFB smears, AFB cultures, AFB nucleic acid amplification tests, histologic evaluation, IGRA, and antimicrobial susceptibility testing.

Access to Pharmaceuticals
Facilitation of timely and efficient access to pharmaceuticals for treatment of TB disease and LTBI without economic burden to the patient.

Care Coordination
Build a collaborative care process that assesses, plans, implements, coordinates, monitors, and evaluates the options and services required to meet an individual’s health needs, using communication and available resources to promote quality, cost-effective outcomes (Commission for Case Manager Certification (CCMC) & Institute for Healthcare Improvement)

Communication
Development and implementation of a coherent strategy to optimize planned, sustained and resourced advocacy and communications approaches to internal and external stakeholders, flowing from a clear statement of the vision, mission and strategic objectives of WRHA Integrated TB Services.

Education and Awareness
Development and implementation of an education strategy to provide key health care, government, private and community/public stakeholders with the knowledge and skills required to reduce the spread of tuberculosis and to optimize the delivery of TB services.

Health Promotion and Disease Prevention
Use of methods to enable persons and communities to increase control over their health and its determinants using education, counseling, and social marketing; and use of approaches (including LTBI screening, Public Health legislation, new technology and advancing best practices) to prevent the spread of tuberculosis within families and communities.

Research and Evaluation
Systematic collection and analysis of non-routine data on an “ad hoc” basis in order to answer specific research or evaluation questions designed to determine and improve the effectiveness of health programs and services.

Social Determinants of Health
Advocate for and address determinants of health to reduce the spread of tuberculosis (including improving access to care, better housing, decreasing cultural barriers, etc).

Surveillance and Reporting
Systematic routine collection and analysis of key indicator data on a continuous “real-time” basis in order to monitor and regularly report on TB disease/infection trends and to provide the necessary information to recommend appropriate actions as needed.
INTEGRATED TB SERVICES VISION AND MISSION

Integrated TB Services Vision Statement
(*defines purpose and includes aspirations, clear picture of future*)

Integrated TB Services ensures effective integration of TB prevention, diagnosis, management and control services to:

- Achieve and sustain an annual decline in TB disease incidence rate of 4%
- Facilitate coordinated, individual, family and community-centred quality care and expertise across the TB spectrum
- Quantify and address the impact on relationships between social inequities and TB infection, care and support services.

Integrated TB Services Mission Statement
(*specific, measurable, achievable, relevant and time-bound*)

Integrated Tuberculosis Services will:

- Develop an inter-professional, integrated and collaborative care delivery model
- Ensure equitable and coordinated access to expertise in TB care and support services
- Provide high quality TB care and support services while maximizing available resources
- Ensure care and support services are based on data and evidence-informed decision-making
- Collaborate with and advocate for communities to protect and improve their health and well-being.

THE 5 ELEMENTS OF DIRECTLY OBSERVED THERAPY¹

1. Political commitment with increased and sustained financing.
2. Case detection through quality-assured bacteriology.
3. Standardized treatment with supervision and patient support.
4. An effective drug supply and management system.
5. Monitoring and evaluation system and impact measurement.

THE 6 COMPONENTS OF STOP TUBERCULOSIS STRATEGY

1. Pursue high-quality DOTS expansion and enhancement.
2. Address TB and HIV, multi-drug resistant TB, and the needs of poor and vulnerable populations.
   a. Scale up collaborative TB and HIV activities.
   b. Scale up prevention and management of multidrug-resistant TB.
   c. Address the needs of TB contacts and of poor and vulnerable populations.
3. Contribute to health system strengthening based on primary health care.
   a. Help improve health policies, human resource development, financing, supplies, service delivery and information.
   b. Strengthen infection control in health services, other congregate settings and households.
   c. Upgrade laboratory networks and implement the Practical Approach to Lung Health.
   d. Adapt successful approaches from other fields and sectors, and foster action on the social determinants of health.
4. Engage all care providers.
   a. Involve all public, voluntary, corporate, and private providers through public-private mix approaches.
   b. Promote use of the International Standards for Tuberculosis Care.
5. Empower people with TB and communities through partnership.
   a. Pursue advocacy, communication and social mobilization.
   b. Foster community participation in TB care.
   c. Promote use of Patients’ Charter for Tuberculosis Care.
6. Enable and promote research.

4. What alignment do you see between the Integrated TB Services Vision, Mission, and Conceptual and Operational Frameworks; and The 5 Elements of DOTS and The 6 Components of the Stop TB Strategy?

LEADERSHIP FRAMEWORK FOR SYSTEM OF EXCELLENCE

The Institute for Healthcare Improvement (IHI) has a framework outlining leadership requirements for improving healthcare systems. As we work on designing an integrated system of TB services for the Winnipeg Health Region, this framework can help give us an understanding of the components required to make these changes.

Review the components of the framework in Figure 4 and interactions amongst them. Using the general concepts from this framework, please provide responses to the following three questions. While we may be making “the status quo uncomfortable”, we also want to be making “the future attractive” and more favourable than the “status quo”.

Figure 4. Adapted from the IHI Framework for Leadership for Improvement
5. What is currently occurring around Integrated TB Services that provides you encouragement that developments are going in the right direction?

6. What is currently occurring around Integrated TB Services that is proving uncomfortable for your program and / or yourself?

7. What needs to happen to make the future of Integrated TB Services and your area’s part in it attractive?
CONSIDERING

Who are the People with TB?
What are The Needs of People, Families and Communities with TB?
What Do We Need to Do? Healthcare System Design
Lessons Learned: The Veteran’s Hospital Administration ReDesign

WHO ARE THE PEOPLE WITH TB IN MANITOBA?

Over the last decade, Manitoba has seen a gradual net increase in the incidence rate of TB. Who are the people with TB in Manitoba? The Public Health Agency of Canada lists 2009 TB rates in Canada as 4.7/100,000, down from 4.9 in 2008. The 2009 TB rates in Manitoba were 12.8/100,000, up from 11.7 in 2008.

The highest incidence rate appears to be amongst people between 30 – 44 years of age and just under 60% are Status First Nations while almost 33% are newcomers to Canada.

8. From your experience, describe the typical person with TB, their family and community.
As Hargreaves et al outline, in “The Social Determinants of Tuberculosis: From Evidence to Action,” “national TB incidence rates appear more closely correlated with social and economic determinants such as the human development index, access to water sanitation, and child mortality than to the success of DOTS (p 1).”

**WHAT ARE THE NEEDS OF PEOPLE, FAMILIES AND COMMUNITIES WITH TB?**

The most urgent daily needs of people, families and communities with TB revolve primarily around social and economic determinants of health. Action on these determinants will require “structural interventions” that shift our focus to “the conditions in which populations with high levels of TB grow, live, work, and age (Hargreaves)”. This will require us to think beyond our biomedical models of health care interventions.

Figure 5 “reproduces a recently published framework from the WHO that identifies proximate risk factors and upstream determinants of TB. Within this framework, 2 strategic entry points for action were identified 1) poverty, low socioeconomic status and low education status and, 2) crowding and poor ventilation. Collaboration with stakeholders from beyond the health care sector”, will be required to adequately address these entry points.

Biomedical and structural interventions are sometimes characterized as competing approaches to TB control based on different interpretations of the etiology of TB. Expanding our vision to include social determinants as targets for TB control efforts, in addition to biomedical indicators, does not require us to rethink TB epidemiology nor to devote all our resources to eradicating poverty. Rather, in addition to existing TB control efforts, it may be possible (and necessary) to address selected factors in the daily living conditions of TB patients and their communities that might influence TB epidemiology (p 3, Hargreaves).

TB control might be strengthened if TB control programs are more actively involved in designing, developing, and motivating initiatives to improve living conditions in places where TB is a major public health problem (p 7, Hargreaves). We need to examine if or how Integrated TB Services can contribute to improving the social and economic determinants of TB.
Figure 5. Conceptual Framework and strategic entry points for intervention outside the health care sector (Hargreaves et al).
9. How might Integrated TB Services have an impact on the social and economic determinants that affect TB rates?

10. How could Integrated TB Services learn about patients’ experiences within the current system of care of TB? How might you be involved in exploring patients’ experiences?
WHAT DO WE NEED TO DO? HEALTHCARE SYSTEM DESIGN

“What do we need to do? Healthcare system design

An organization must recognize itself as a system and operate as a system. A system is an interdependent group of items, people, or processes with a common purpose.”

(Langley et al, 1996)

Taking this view of a system, what does Integrated TB Services, need to do in terms of its system design and development over the coming years to build on the expertise and collaboration within to move our system to one of excellence?

In the article, A systematic review of economic evaluation studies of tuberculosis control in high-income countries, Verdier suggests that we are, perhaps, too cautious and risk-adverse when introducing new interventions in TB control. It is suggested that this caution may be in part because of how interventions are currently evaluated and on historically ingrained dogma concerning approaches to TB control. He suggests that methodologies have over-estimated cost and under-appreciated benefit.

For instance, Verdier suggests, that hospitalization generally seems to be an economically unfavourable intervention while recognizing that, certain TB patients require hospital care for cure or for isolation. He adds,

“Nevertheless, significant cost reduction can be achieved in TB control programmes when the focus is shifted from hospital to out-patient care, minimising the number of hospitalisations. The interventions that most often have favourable conclusions are those focusing on medication, i.e., non-classical options such as DOTS or short-course prophylaxis for LTBI, as was also reported in an earlier TB medication review.” (p 7)

In Improving the Patient Experience through Design, Golden notes that while the system often extends beyond a centre or a locus of function, it can be very challenging to re-envision the design not just to adjust the existing situation in the clinic or hospital:

Prior to patients receiving a chemotherapy treatment, blood work and a physical examination are required to confirm patient readiness. In our interviews with patients, many revealed that they would like to have their blood tested at a laboratory close to their home, have the results transmitted directly to the physician or electronic chart at (the hospital) and receive a follow-up phone call for review. Their hope was twofold: (1) if the results showed that they were not ready to receive treatment, they could avoid a trip to the hospital entirely; and (2) if the results did show a readiness for treatment, the patient would not have to rush to the hospital, wait at the blood laboratory and wait for the results, and could instead proceed immediately to the treatment stage. While such changes may not be possible in some cases, patients were keen to explore this possibility as technology and information technology capabilities advance. (P 9)
Designing systems of excellence requires us to carefully – and objectively - examine what we do and the needs that those activities meet.

**11. What are we not doing that we should be doing to meet patient needs? What needs would this meet?**

<table>
<thead>
<tr>
<th>Should be Doing</th>
<th>Need met</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**12. What are we doing that we might do better to meet patient needs? What needs would these improved functions meet?**

<table>
<thead>
<tr>
<th>Might do Better</th>
<th>Need met</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>
The move from considering primarily functionality and safety to one where health care systems work with patient and family needs and experiences is a big shift in healthcare system design. Healthcare has been increasingly looking at expertise outside its own fields. Design of systems is one of these fields.

Researchers, Paul Bate and Glenn Robert, with the Centre for Health Informatics & Multiprofessional Education, Royal Free & University College Medical School, University College London, asked how to get beyond what the patient liked and didn’t like and used the discipline of design sciences to inform their work. As Bate and Robert assert in “Experience-based design: from redesigning the system around the patient to co-designing services with the patient”:

This is not just about being more patient-centred or promoting greater patient participation. It goes much further than this, placing the experience goals of patients and users at the centre of the design process and on the same footing as process and clinical goals. (P 1)

As they outline there are three main components to good design: performance, engineering and the aesthetics of the experience. Consider Figure 6. Bate and Robert suggest that healthcare has always been associated with performance through evidence-based practice, pathways and process design and with engineering in terms of clinical governance and standards and safeguards for patients. But the third area, “the aesthetics of the experience,” what they define as “the usability,” has not been truly considered or involved in healthcare system design.

Figure 6. The components of good design (Bate and Robert).

The background paper for the Partnering with Patients and Families to Design a Patient and Family – Centred Health Care System states clearly that the challenges facing healthcare in the US demand a system-wide solution that involves redesign – an enormous task that must be collaboratively undertaken by key stakeholders including patients and their families.
As we design the Integrated TB Services system, we will ask questions and find ways to involve people and families and communities with tuberculosis about their experiences, not just with the disease, but with the system. How “user-friendly” is our system?

13. What does patient and family-centred care mean to you?

14. From your perspective/involvement with people with TB, how do they generally navigate the TB health system?

15. How patient and family-centred do you think TB care is? Rate on a scale of 1 – 10 (1=not at all, 10=completely). Please explain your rating.
LESSONS LEARNED: THE VETERAN HOSPITAL ADMINISTRATION (VHA) RE-DESIGN

The Veterans Hospital Administration (VHA) in the United States is an example of a courageous, visionary system re-design, documented in Kizer and Dudley’s, *Extreme Makeover: Transformation of the Veterans Health Care System*. The highly complex, federally-funded Veterans’ Affairs (VA) Hospital System in the US provides us with some interesting thoughts and lessons learned around healthcare system design. Their reengineering, undertaken through 1994 – 1999, sought to create a seamless continuum of consistent and predictable high-quality, patient-centered care that was of superior value (p 5) – a vision similar to our own Integrated TB Services.

In addition to the VHA vision, there are other similarities between the VHA and Integrated TB Services in the Winnipeg Health Region:

- People using this health system are sicker and more socioeconomically disadvantaged than the average population. (p 4)
- The VHA’s patient population has complex needs and includes a number of groups designated as special populations.
- The VHA’s system of health care administration was highly centralized and sought to decentralize some decision-making and accountability.
- The VHA was “hospital-centric” and sought to transfer the locus of care to community-based settings.
- The VHA strived to modernize information management to allow systematic data gathering and reporting to evaluate performance and inform strategic directions.
- Both groups have a growing population with increasing complexity in their health care needs.
- The VHA and Integrated TB Services have a new, merged administration charged with consolidating and coordinating programs and services.
- There is a history of media attention to the quality of care provided in both situations.

There is valuable guidance in considering the transformative redesign of the VHA system. The paper outlining their process, *Extreme Makeover: Transformation of the Veterans Health Care System*, is included in its entirety.

A list of Kizer’s Top 20 observations and lessons learned are instructive and thought-provoking:

1. The government can provide high-quality and efficient patient-centered health care.
2. Rapid and dramatic change is possible in health care, even in large, politically sensitive, financially stressed, publicly administered health care systems.
3. Improved health care quality, better service, and reduced cost can all be achieved at the same time.
4. Articulation of a clear vision of the new future and how things will be different is essential for any major change effort.
5. The vision must be combined with a pragmatic strategic plan that includes concrete goals, defined responsibilities, and performance measures to assess progress toward achieving the goals.

6. Measuring and publicly reporting performance data using standardized performance measures is a powerful lever for change. Performance data must be fed back to those who can make improvement (e.g., frontline caregivers).

7. To improve performance or quality, leaders must show that improvement is an organizational priority and make sure that everyone in the organization knows it.

8. Decentralization of authority must be coupled with a full understanding of mission-critical activities, clear delineation of responsibility and accountability, and monitoring of performance to help prevent things from falling through the cracks\(^3\).

9. Automated information management is a critical tool for health care transformation and quality improvement; the electronic health record (EHR) is an essential tool today.

10. An integrated system of health care can be achieved with either vertical and/or virtual integration.

11. The information management system, contracts, partnership agreements, and similar arrangements are the glue that holds a virtually integrated system together.

12. Focusing on changing organizational performance and processes is more productive than focusing on poor-performing individuals.

13. If health care change is to be successful, then frontline clinicians must be continuously part of the planning and implementation from the beginning.

14. Much of what is needed to accomplish and sustain change needs to be in place prior to initiating the change effort.

15. When undertaking major change, there is no such thing as too much communication about the proposed changes.

16. Training and education are critical components of the change process so that personnel are prepared to function in a new way.

17. No matter how good or extensive the planning is, it can never foresee every problem that may require mid-course correction. Therefore, in planning for change, perfect should not become the enemy of the good.

18. Health care organizations are complex adaptive systems governed by the rules of complexity theory. Health care change agents must understand chaos and complexity theory.

19. Alignment of finances with desired outcomes is essential in any change effort.

20. Leaders must maintain an unwavering focus on the end goal, despite being distracted by situational circumstances.

\(^3\) Note that one of the goals was to de-centralize decision making to the lowest, most appropriate management level and then to hold management accountable for their decisions (p6-7).
16. Thinking about redesigning TB services delivery in the Winnipeg Health Region, which three of these “Top 20” lessons learned do you feel would best inform the strategic directions of Integrated TB Services?
SECTION 3: APPENDICES

APPENDIX 1
WINNIPEG REGIONAL HEALTH AUTHORITY VISION, MISSION AND STRATEGIC DIRECTION AND MISSION

Mission
To co-ordinate and deliver safe and caring services that promote health and well-being

Vision
Healthy People. Vibrant Communities. Care for All.

Values
- Dignity - as a reflection of the self-worth of every person
- Care - as an unwavering expectation of every person
- Respect - as a measure of the importance of every person

Our Commitments
- Innovation - that fosters improved care, health and well-being
- Excellence - as a standard of our care and service
- Stewardship - of our resources, knowledge and care

Strategic Directions
The Winnipeg Health Region’s Board of Directors has recently approved six new strategic directions to guide the Region's operations for the next five years, effective April 2011. The Strategic Directions are:

- **Enhance Patient Experience**: Enhance patient experience and outcomes by listening more carefully to patients and considering their needs when designing and delivering services.
- **Improve Quality and Integration**: Improve access to quality and safe care through improved integration of services and then use of evidence informed practice.
- **Foster Public Engagement**: Work with the community to improve its health and well-being by forging partnerships and collaborating with those we serve.
- **Support a Positive Work Environment**: Enhance quality care by fostering a work environment where staff are valued, supported and accountable, and who reflect the diverse nature of our community.
- **Advance Research and Education**: Work with stakeholders to enhance academic performance through the development of an academic health sciences network where clinical education and research activities are better aligned and integrated.
- **Build Sustainability**: Balance the provision of health-care services within the available resources to ensure a sustainable health-care system.
APPENDIX 2
THE PATIENTS’ CHARTER FOR TUBERCULOSIS CARE

Patients’ Rights: You have the right to:

Care
• The right to free and equitable access to tuberculosis care, from diagnosis through treatment completion, regardless of resources, race, gender, age, language, legal status, religious beliefs, sexual orientation, culture, or having another illness
• The right to receive medical advice and treatment which fully meets the new *International Standards for Tuberculosis Care*, centering on patient needs, including those with multidrug-resistant tuberculosis (MDR-TB) or tuberculosis-human immunodeficiency virus (HIV) coinfections and preventative treatment for young children and others considered to be at high risk
• The right to benefit from proactive health sector community outreach, education, and prevention campaigns as part of comprehensive care programs

Dignity
• The right to be treated with respect and dignity, including the delivery of services without stigma, prejudice, or discrimination by health providers and authorities
• The right to quality healthcare in a dignified environment, with moral support from family, friends, and the community

Information
• The right to information about what healthcare services are available for tuberculosis and what responsibilities, engagements, and direct or indirect costs are involved
• The right to receive a timely, concise, and clear description of the medical condition, with diagnosis, prognosis (an opinion as to the likely future course of the illness), and treatment proposed, with communication of common risks and appropriate alternatives
• The right to know the names and dosages of any medication or intervention to be prescribed, its normal actions and potential side-effects, and its possible impact on other conditions or treatments
• The right of access to medical information which relates to the patient’s condition and treatment and to a copy of the medical record if requested by the patient or a person authorized by the patient
• The right to meet, share experiences with peers and other patients and to voluntary counseling at any time from diagnosis through treatment completion

Choice
• The right to a second medical opinion, with access to previous medical records
• The right to accept or refuse surgical interventions if chemotherapy is possible and to be informed of the likely medical and statutory consequences within the context of a communicable disease
• The right to choose whether or not to take part in research programs without compromising care

Confidence
• The right to have personal privacy, dignity, religious beliefs, and culture respected
• The right to have information relating to the medical condition kept confidential and released to
other authorities contingent upon the patient’s consent

**Justice**
- The right to make a complaint through channels provided for this purpose by the health authority and to have any complaint dealt with promptly and fairly
- The right to appeal to a higher authority if the above is not respected and to be informed in writing of the outcome

**Organization**
- The right to join, or to establish, organizations of people with or affected by tuberculosis and to seek support for the development of these clubs and community-based associations through the health provider’s, authorities, and civil society
- The right to participate as “stakeholders” in the development, implementation, monitoring, and evaluation of tuberculosis policies and programs with local, national, and international health authorities

**Security**
- The right to job security after diagnosis or appropriate rehabilitation upon completion of treatment The right to nutritional security or food supplements if needed to meet treatment requirements

**Patients’ Responsibilities: You have the responsibility to:**

**Share Information**
- The responsibility to provide the healthcare giver as much information as possible about present health, past illnesses, any allergies, and any other relevant details
- The responsibility to provide information to the health provider about contacts with immediate family, friends, and others who may be vulnerable to tuberculosis or may have been infected by contact

**Follow Treatment**
- The responsibility to follow the prescribed and agreed treatment plan and to conscientiously comply with the instructions given to protect the patient’s health, and that of others
- The responsibility to inform the health provider of any difficulties or problems with following treatment or if any part of the treatment is not clearly understood

**Contribute to Community Health**
- The responsibility to contribute to community well-being by encouraging others to seek medical advice if they exhibit the symptoms of tuberculosis
- The responsibility to show consideration for the rights of other patients and healthcare providers, understanding that this is the dignified basis and respectful foundation of the tuberculosis community

**Show Solidarity**
- The moral responsibility of showing solidarity with other patients, marching together towards cure
- The moral responsibility to share information and knowledge gained during treatment and to pass this expertise to others in the community, making empowerment contagious
- The moral responsibility to join in efforts to make the community tuberculosis free
APPENDIX 3

INTERNATIONAL STANDARDS

The Standards should be viewed as a living document that will be revised as technology, resources, and circumstances change. As written, the Standards are presented within a context of what is generally considered to be feasible now or in the near future.

The Standards are also intended to serve as a companion to and support for the Patients’ Charter for Tuberculosis Care developed in tandem with the Standards. The Charter specifies patients’ rights and responsibilities and will serve as a set of standards from the point of view of the patient, defining what the patient should expect from the provider and what the provider should expect from the patient.

Standards for Diagnosis

**Standard 1.** All persons with otherwise unexplained productive cough lasting two–three weeks or more should be evaluated for tuberculosis.

**Standard 2.** All patients (adults, adolescents, and children who are capable of producing sputum) suspected of having pulmonary tuberculosis should have at least two, and preferably three, sputum specimens obtained for microscopic examination. When possible, at least one early morning specimen should be obtained.

**Standard 3.** For all patients (adults, adolescents, and children) suspected of having extrapulmonary tuberculosis, appropriate specimens from the suspected sites of involvement should be obtained for microscopy and, where facilities and resources are available, for culture and histopathological examination.

**Standard 4.** All persons with chest radiographic findings suggestive of tuberculosis should have sputum specimens submitted for microbiological examination.

**Standard 5.** The diagnosis of sputum smear-negative pulmonary tuberculosis should be based on the following criteria: at least three negative sputum smears (including at least one early morning specimen); chest radiography findings consistent with tuberculosis; and lack of response to a trial of broad-spectrum antimicrobial agents. (NOTE: Because the fluoroquinolones are active against *M. tuberculosis* complex and, thus, may cause transient improvement in persons with tuberculosis, they should be avoided.) For such patients, if facilities for culture are available, sputum cultures should be obtained. In persons with known or suspected HIV infection, the diagnostic evaluation should be expedited.

**Standard 6.** The diagnosis of intrathoracic (i.e., pulmonary, pleural, and mediastinal or hilar lymph node) tuberculosis in symptomatic children with negative sputum smears should be based on the finding of chest radiographic abnormalities consistent with tuberculosis and either a history of exposure to an infectious case or evidence of tuberculosis infection (positive tuberculin skin test or interferon gamma release assay). For such patients, if facilities for culture are available, sputum specimens should be obtained (by expectoration, gastric washings, or induced sputum) for culture.
**Standards for Treatment**

**Standard 7.** Any practitioner treating a patient for tuberculosis is assuming an important public health responsibility. To fulfill this responsibility the practitioner must not only prescribe an appropriate regimen but, also, be capable of assessing the adherence of the patient to the regimen and addressing poor adherence when it occurs. By so doing, the provider will be able to ensure adherence to the regimen until treatment is completed.

**Standard 8.** All patients (including those with HIV infection) who have not been treated previously should receive an internationally accepted first-line treatment regimen using drugs of known bioavailability. The initial phase should consist of two months of isoniazid, rifampicin, pyrazinamide, and ethambutol. The preferred continuation phase consists of isoniazid and rifampicin given for four months. Isoniazid and ethambutol given for six months is an alternative continuation phase regimen that may be used when adherence cannot be assessed, but it is associated with a higher rate of failure and relapse, especially in patients with HIV infection.

**Standard 9.** The doses of antituberculosis drugs used should conform to international recommendations. Fixed-dose combinations of two (isoniazid and rifampicin, three (isoniazid, rifampicin, and pyrazinamide), and four (isoniazid, rifampicin, pyrazinamide, and ethambutol) drugs are highly recommended, especially when medication ingestion is not observed.

**Standard 10.** To foster and assess adherence, a patient-centered approach to administration of drug treatment, based on the patient’s needs and mutual respect between the patient and the provider, should be developed for all patients. Supervision and support should be gender-sensitive and age-specific and should draw on the full range of recommended interventions and available support services, including patient counseling and education. A central element of the patient-centered strategy is the use of measures to assess and promote adherence to the treatment regimen and to address poor adherence when it occurs. These measures should be tailored to the individual patient’s circumstances and be mutually acceptable to the patient and the provider. Such measures may include direct observation of medication ingestion (directly observed therapy—DOT) by a treatment supporter who is acceptable and accountable to the patient and to the health system.

All patients should be monitored for response to therapy, best judged in patients with pulmonary tuberculosis by follow-up sputum microscopy (two specimens) at least at the time of completion of the initial phase of treatment (two months), at five months, and at the end of treatment. Patients who have positive smears during the fifth month of treatment should be considered as treatment failures and have therapy modified appropriately. (See Standards 14 and 15.) In patients with extrapulmonary tuberculosis and in children, the response to treatment is best assessed clinically. Follow-up radiographic examinations are usually unnecessary and may be misleading.

**Standard 11.** A written record of all medications given, bacteriologic response, and adverse reactions should be maintained for all patients.

**Standard 12.** In areas with a high prevalence of HIV infection in the general population and
where tuberculosis and HIV infection are likely to co-exist, HIV counseling and testing is indicated for all tuberculosis patients as part of their routine management. In areas with lower prevalence rates of HIV, HIV counseling and testing is indicated for tuberculosis patients with symptoms and/or signs of HIV-related conditions and in tuberculosis patients having a history suggestive of high risk of HIV exposure.

**Standard 13.** All patients with tuberculosis and HIV infection should be evaluated to determine if antiretroviral therapy is indicated during the course of treatment for tuberculosis. Appropriate arrangements for access to antiretroviral drugs should be made for patients who meet indications for treatment. Given the complexity of co-administration of antituberculosis treatment and antiretroviral therapy, consultation with a physician who is expert in this area is recommended before initiation of concurrent treatment for tuberculosis and HIV infection, regardless of which disease appeared first. However, initiation of treatment for tuberculosis should not be delayed. Patients with tuberculosis and HIV infection should also receive cotrimoxazole as prophylaxis for other infections.

**Standard 14.** An assessment of the likelihood of drug resistance, based on history of prior treatment, exposure to a possible source case having drug-resistant organisms, and the community prevalence of drug resistance, should be obtained for all patients. Patients who fail treatment and chronic cases should always be assessed for possible drug resistance. For patients in whom drug resistance is considered to be likely, culture and drug susceptibility testing for isoniazid, rifampicin, and ethambutol should be performed promptly.

**Standard 15.** Patients with tuberculosis caused by drug-resistant (especially multiple-drug resistant [MDR]) organisms should be treated with specialized regimens containing second-line antituberculosis drugs. At least four drugs to which the organisms are known or presumed to be susceptible should be used, and treatment should be given for at least 18 months. Patient-centered measures are required to ensure adherence. Consultation with a provider experienced in treatment of patients with MDR tuberculosis should be obtained.
FURTHER RESOURCES AND READING

The following articles are attached for information as separate PDF files.

http://www.thelancet.com/search/results?fieldName=Authors&searchTerm=Ted+Alcorn


END NOTES


