ACKNOWLEDGEMENTS

*Allen + Clarke* sincerely acknowledges all the stakeholders who took the time to attend the Think Tank. Their input, experience, knowledge and personal stories were much appreciated, and will be used to inform the development of relevant sections of the Clinical Pathway.
CONTENTS

ACKNOWLEDGEMENTS 2
GLOSSARY 5

1. INTRODUCTION 6
   1.1. Purpose 6
   1.2. Stakeholders at the Think Tank 6

2. THINK TANK PROGRAMME 7

3. METHODS OF CONTRIBUTION 8

4. INTRODUCTION TO THE PROJECT 9
   4.1. Welcome to country – Uncle Charles (Chicka) Madden 9
   4.2. Opening remarks – Mr Paul Houliston, Allen + Clarke Facilitator 9
   4.3. Project overview – Dr Robyn Haisman-Welsh, Allen + Clarke, Project Lead 9

5. DISCUSSION OUTPUTS 11
   5.1. Session 1: Signs and symptoms attributed to DSCATT 11
       5.1.1. Overview and objectives of this session 11
       5.1.2. Stakeholder views on symptoms and signs they attribute to DSCATT most frequently in adults 12
       5.1.3. Stakeholder views on the number of symptoms to trigger referral 13
       5.1.4. Stakeholder views on symptoms and signs attributed to DSCATT most commonly experienced by children 13
       5.1.5. Stakeholder views on symptoms and signs of DSCATT experienced by pregnant women 14
   5.2. Session 2: Diagnosable diseases and disorders to be excluded before a patient is considered for DSCATT Clinical Pathway 15
       5.2.1. Overview and objectives of session 2 15
       5.2.2. Stakeholder views on diagnosable diseases and disorders to exclude 16
       5.2.3. Stakeholder views on the diseases and disorders most commonly experienced by adult patients, child patients and pregnant women 16
   5.3. Session 3: The ideal patient journey 17
       5.3.1. Overview and objectives of session 3 17
       5.3.2. Stakeholder views on assessment, screening and diagnosis 18
       5.3.3. Stakeholder views on treatment and management 18
       5.3.4. Stakeholder views on specialist referral 19
       5.3.5. Stakeholder views on recovery and self-management 19
       5.3.6. Further stakeholder views on the patient journey 19
   5.4. Session 4: Health practitioners and skills required 20
       5.4.1. Overview and objectives of the session 20
       5.4.2. Stakeholder feedback 20
   5.5. Closing session 21

APPENDIX 1: LIST OF THINK TANK PARTICIPANT ORGANISATIONS 22

APPENDIX 2: THINK TANK PRESENTATION 24
Tables

Table 1: Signs and symptoms attributed to DSCATT as identified by Think Tank stakeholders

Table 2: Signs and symptoms experienced by children as identified by Think Tank stakeholders

Table 3: Signs and symptoms identified by stakeholders as being experienced by pregnant women

Table 4: Stakeholder organisations represented (in person)

Table 5: Stakeholder organisations represented (online)

Figures

Figure 1: Clinical pathway minimum requirements

Figure 2: Objectives of Session 1

Figure 3: Objectives of Session 2

Figure 4: Objectives of Session 3

Figure 5: Stages of Clinical Care

Figure 6: Objectives of Session 4

Figure 7: Process for development of DSCATT Clinical Pathway
## GLOSSARY

<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACA</td>
<td>Acrodermatitis chronica atrophicans</td>
</tr>
<tr>
<td>ACIIDS</td>
<td>Australian Chronic Infectious and Inflammatory Disease Society</td>
</tr>
<tr>
<td>ALS</td>
<td>Amyotrophic lateral sclerosis</td>
</tr>
<tr>
<td>CFS</td>
<td>Chronic fatigue syndrome</td>
</tr>
<tr>
<td>DSCATT</td>
<td>Debilitating Symptom Complexes Attributed to Ticks</td>
</tr>
<tr>
<td>GI</td>
<td>Glycaemic Index</td>
</tr>
<tr>
<td>GP</td>
<td>General Practitioner</td>
</tr>
<tr>
<td>LDAA</td>
<td>Lyme Disease Association of Australia</td>
</tr>
<tr>
<td>MCAD</td>
<td>Mast Cell Activation Disorder</td>
</tr>
<tr>
<td>ME</td>
<td>Myalgic encephalomyelitis</td>
</tr>
<tr>
<td>MS</td>
<td>Multiple sclerosis</td>
</tr>
<tr>
<td>MSIDS</td>
<td>Multiple Systemic Infectious Disease Syndrome</td>
</tr>
<tr>
<td>NHMRC</td>
<td>National Health and Medical Research Council</td>
</tr>
<tr>
<td>PFAPA</td>
<td>Periodic Fever, Aphthous stomatitis, Pharyngitis, Adenitis</td>
</tr>
<tr>
<td>STI</td>
<td>Sexually transmitted infection</td>
</tr>
<tr>
<td>VZV</td>
<td>Varicella-Zoster Virus</td>
</tr>
</tbody>
</table>
1. INTRODUCTION

The Australian Department of Health (the Department) has contracted Allen and Clarke Policy and Regulatory Specialists (Allen + Clarke) to develop an evidence-based clinical pathway and multidisciplinary care model (the Clinical Pathway) for patients suffering from debilitating symptom complexes attributed to ticks (DSCATT) which can be flexibly applied in both private and public healthcare settings. The purpose of the Clinical Pathway is to support decision-making on differential diagnosis and referral pathways for patients presenting with either new onset or unresolved debilitating symptoms with, or without, a history of tick bites, which cannot be attributed to another condition (acute or chronic).

The Clinical Pathway will be designed specifically for the Australian health care context in order for it to be generally accepted by the Australian medical and other health professions and patient groups as part of their clinical management.

The Clinical Pathway will be informed by the relevant literature and key documents. It will be developed in consultation with key stakeholders, including medical and other health professionals, government health authorities and patient groups.

On 8 May 2019, as the first stage of key stakeholder consultation on the Clinical Pathway, Allen + Clarke convened a Think Tank with key stakeholders at the Rydges International Airport Hotel in Sydney to discuss the nature of DSCATT and future support pathways.

1.1. Purpose

The purpose of this report is to capture the key discussion points and outcomes of the DSCATT Think Tank. Allen + Clarke will use the Think Tank discussions, a literature review and other input captured through the consultation process, to inform the development of the Clinical Pathway.

1.2. Stakeholders at the Think Tank

A list of the organisations represented at the Think Tank is provided in Appendix 1. Over 60 stakeholders were invited to attend the Think Tank. Of these, 41 attended: 25 in person and 16 online. Slightly more than half of stakeholders in attendance represented patient groups. Representatives from the Department of Health attended as observers.

Reference to stakeholders in this report relates only to those stakeholders who attended the Think Tank.
2. THINK TANK PROGRAMME

**Venue:** Hercules Room, Rydges Sydney Airport Hotel, Sydney International Airport  
**Date:** Wednesday 8 May 2019  
**Time:** 10am – 4pm

<table>
<thead>
<tr>
<th>Time</th>
<th>Item</th>
<th>Lead</th>
</tr>
</thead>
<tbody>
<tr>
<td>09.00</td>
<td>Coffee and tea on arrival</td>
<td></td>
</tr>
<tr>
<td>10.00</td>
<td><strong>Opening of the Think Tank</strong></td>
<td>Mr Paul Houliston, Uncle Chicka Madden, Dr Robyn Haisman-Welsh</td>
</tr>
<tr>
<td></td>
<td>• Welcome to country</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Introduction to the project</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Purpose of today</td>
<td></td>
</tr>
<tr>
<td>10.45</td>
<td><strong>Session 1: Symptoms and clinical signs attributed to DSCATT</strong></td>
<td>Dr Virginia Hope</td>
</tr>
<tr>
<td>11.30</td>
<td><strong>Morning break</strong></td>
<td></td>
</tr>
<tr>
<td>11.45</td>
<td><strong>Session 2: Diagnosable diseases and disorders to be excluded before a patient is considered for DSCATT referral pathway</strong></td>
<td>Dr Virginia Hope</td>
</tr>
<tr>
<td>13.00</td>
<td><strong>Lunch</strong></td>
<td></td>
</tr>
<tr>
<td>13.40</td>
<td><strong>Session 3: What does the ideal patient journey look like?</strong></td>
<td>Ms Catherine Marshall</td>
</tr>
<tr>
<td>14.50</td>
<td><strong>Afternoon break</strong></td>
<td></td>
</tr>
<tr>
<td>15.10</td>
<td><strong>Session 4: Who and when: Regulated health professions and skills that best meet the clinical needs of patients considered for the DSCATT referral pathway</strong></td>
<td>Ms Marion Clark</td>
</tr>
<tr>
<td>15.45</td>
<td><strong>Closing of the Think Tank</strong></td>
<td>Mr Paul Houliston</td>
</tr>
<tr>
<td></td>
<td>• Next steps from here</td>
<td></td>
</tr>
<tr>
<td>16.00</td>
<td><strong>Think Tank close</strong></td>
<td></td>
</tr>
</tbody>
</table>
3. METHODS OF CONTRIBUTION

This report summarises the key themes and discussions presented by stakeholders, including state and territory health officials, medical professionals and patient groups who participated in the Think Tank in person or online.

Department officials present at the Think Tank and Allen + Clarke facilitators did not contribute responses to the questions posed for the discussion outputs detailed in this report.

The Think Tank was designed to be very participative, providing opportunities for maximum input from stakeholders. Feedback from stakeholders was captured in several different ways throughout the day, including:

- using Sli.do – a website designed to “crowd-source” questions and ideas;
- writing on sticky notes or large pieces of paper on the walls during the sessions;
- speaking directly to the facilitator at their table;
- speaking directly to the room during plenary sessions; and
- contributing through Zoom videoconferencing, for those who were unable to attend in person.

A number of technical issues with the provision of the online aspect of the workshop limited online stakeholders’ ability to meaningfully engage with some sessions throughout the day. Given these issues, relevant contributions were captured as best as possible, and collated. Following the Think Tank, the online forum was kept open for a week with stakeholders invited to contribute any further feedback through this means.
4. INTRODUCTION TO THE PROJECT

4.1. Welcome to country – Uncle Charles (Chicka) Madden

The day opened with a welcome to country by Uncle Charles (Chicka) Madden who is a respected Gadigal Elder in Sydney.

4.2. Opening remarks – Mr Paul Houliston, Allen + Clarke Facilitator

Mr Paul Houliston welcomed stakeholders in the room and online, and outlined the key structure of the day. Sessions were planned to address the overall Clinical Pathway development, including an explanation of how the Think Tank fits into the development process, the discussion topics as presented in the agenda and a brief overview of the next steps in the DSCATT Clinical Pathway development. He emphasised that the format of the day was designed to provide the opportunity for perspectives to be heard.

4.3. Project overview – Dr Robyn Haisman-Welsh, Allen + Clarke, Project Lead

Dr Haisman-Welsh introduced the purpose of the DSCATT project and the Think Tank and outlined the key stages of the project and the five minimum requirements for the Clinical Pathway as presented below in Figure 1. She noted that the project aligns with the Australian Government’s commitment to implement Recommendation 5 of the Senate Inquiry Report. ¹

Figure 1: Clinical pathway minimum requirements

¹ Final Report – Growing evidence of an emerging tick-borne disease that causes a Lyme like illness for many Australian patients – 30 November 2016
https://www.aph.gov.au/Parliamentary_Business/Committees/Senate/Community_Affairs/Lymelikeillness45/Final_Report
The topics for discussion at the Think Tank were designed to collect stakeholder input to inform the requirements of a Clinical Pathway.

The aim of the Think Tank was to:

- understand the issues and perspectives of stakeholders to inform a draft Clinical Pathway which would be subject to further consultation; and
- provide stakeholders with a better understanding of the project, provide an opportunity for stakeholders to contribute ideas on key components of a Clinical Pathway, and outline the timing of future consultation opportunities.

The six principles underpinning discussions throughout the Think Tank were:

- inclusivity,
- receptivity,
- reciprocity,
- respect,
- timeliness, and
- transparency.
5. DISCUSSION OUTPUTS

5.1. Session 1: Signs and symptoms attributed to DSCATT

This session was presented and led by Dr Virginia Hope, Institute of Environmental Science and Research, and Expert Medical Technical Advisor on the Allen + Clarke project team.

5.1.1. Overview and objectives of this session

Dr Hope began by describing the clinical definition of signs and symptoms. She explained that symptoms are subjective and experienced by patients; signs are objectively observable; and that the terms are often used interchangeably.

Dr Hope introduced the objectives of the session, as in Figure 2 below.

![Figure 2: Objectives of Session 1](image)

She acknowledged the lack of peer-reviewed scientific literature describing Australian clinical studies investigating the symptoms and clinical signs of DSCATT. To support the discussion, Dr Hope talked to a series of slides produced from publicly available information on self-reported signs and symptoms attributed to DSCATT, including from the Australian Chronic Infectious and Inflammatory Disease Society (ACIIDS) submission to the Senate Inquiry and the published paper by Brown (2018).³

---

² Presented on pages 31-32 of this report.
5.1.2. Stakeholder views on symptoms and signs they attribute to DSCATT most frequently in adults

Stakeholders were asked to use Sli.do to identify the symptoms and signs they attribute to DSCATT most frequently. There were 111 responses received from Think Tank stakeholders as presented in Table 1 below. Note that some of those identified were not signs or symptoms, rather specific diagnoses (for example, cluster headaches, Irritable Bowel Syndrome, myocarditis, Bell’s Palsy, osteomyelitis).

Table 1: Signs and symptoms attributed to DSCATT as identified by Think Tank stakeholders

<table>
<thead>
<tr>
<th>Sign or symptom identified</th>
<th>Responses</th>
</tr>
</thead>
<tbody>
<tr>
<td>Neurological issues, including brain fog; cognitive dysfunction; memory loss; fine motor impairment and reduced verbal fluency</td>
<td>20</td>
</tr>
<tr>
<td>Chronic fatigue</td>
<td>15</td>
</tr>
<tr>
<td>Headaches/Migraine, including cluster headaches; pressure behind eyes; sinus pain</td>
<td>9</td>
</tr>
<tr>
<td>Heart problems, including palpitations; bradycardia; myocarditis; Lyme carditis and chest pain</td>
<td>8</td>
</tr>
<tr>
<td>Joint pain and inflammation</td>
<td>8</td>
</tr>
<tr>
<td>Gut disorders, including IBS; food intolerance; Glycaemic Index (GI) issues; severe malabsorption and abdominal pain</td>
<td>7</td>
</tr>
<tr>
<td>Neuropathy or dysesthesia</td>
<td>7</td>
</tr>
<tr>
<td>Myalgia</td>
<td>7</td>
</tr>
<tr>
<td>Visual disturbances, including random blindness and eye floaters</td>
<td>7</td>
</tr>
<tr>
<td>Rash including erythema migrans</td>
<td>6</td>
</tr>
<tr>
<td>Reduced stamina, weakness and post-exertional malaise</td>
<td>5</td>
</tr>
<tr>
<td>Arthritis</td>
<td>4</td>
</tr>
<tr>
<td>Sensitivity, including to sounds, smells, temperature and/or chemicals</td>
<td>4</td>
</tr>
<tr>
<td>Chronic pain syndromes</td>
<td>4</td>
</tr>
<tr>
<td>Flu-like symptoms</td>
<td>3</td>
</tr>
<tr>
<td>Nausea/vomiting</td>
<td>3</td>
</tr>
<tr>
<td>Paralysis</td>
<td>3</td>
</tr>
<tr>
<td>Migrating pain</td>
<td>3</td>
</tr>
<tr>
<td>Bell’s palsy</td>
<td>3</td>
</tr>
<tr>
<td>Swollen lymph nodes</td>
<td>3</td>
</tr>
<tr>
<td>Sleep impairment, including insomnia</td>
<td>3</td>
</tr>
<tr>
<td>Shortness of breath</td>
<td>3</td>
</tr>
<tr>
<td>Personality change, including out-of-character anger outbursts; seizures; tremors; stiff neck; bone pain; fever; encephalitis; light-headed or dizziness</td>
<td>2 each</td>
</tr>
</tbody>
</table>
5.1.3. Stakeholder views on the number of symptoms to trigger referral

Stakeholders were asked their views on the minimum number of symptoms that should trigger referral to the DSCATT Clinical Pathway, again using Slido. 25 responses were received.

The majority view of stakeholders was that entry into the Clinical Pathway should rely on clinical assessment by an experienced health professional and individual treatment requirements, rather than the number of symptoms manifested.

5.1.4. Stakeholder views on symptoms and signs attributed to DSCATT most commonly experienced by children

Dr Hope noted that the limited self-reported information available on DSCATT related mostly to adults and little is known about children.

Stakeholders were asked their views on the symptoms and signs most commonly experienced by children (15 years and younger) presenting with systemic symptoms, with or without a history of tick bite and that are or have been attributed to DSCATT. There were 37 responses.

A common view expressed by stakeholders present at the Think Tank was that many of the symptoms and signs identified as experienced by children vary but are the same, or similar, as those identified in Table 1 above.

The following table (Table 2) presents a list of signs and symptoms identified by stakeholders as most commonly experienced among children, noting that some of those identified were not signs or symptoms (for example, asthma, autism).

<table>
<thead>
<tr>
<th>Sign or symptom identified</th>
<th>Responses</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pain, including joint pain; muscle pain; bone pain and wrist pain</td>
<td>11</td>
</tr>
<tr>
<td>Extreme fatigue or lethargy</td>
<td>9</td>
</tr>
<tr>
<td>Behaviour changes, including depression; rage; poor behaviour and attention issues</td>
<td>9</td>
</tr>
<tr>
<td>Gut disorders, including abdominal pain; malabsorption; food allergies or intolerances and constipation</td>
<td>7</td>
</tr>
<tr>
<td>Rash, including petechial; lines; bull’s eye and acrodermatitis chronica atrophicans (ACA)</td>
<td>5</td>
</tr>
<tr>
<td>Headaches</td>
<td>4</td>
</tr>
<tr>
<td>Seizures, including febrile convulsions and twitching</td>
<td>4</td>
</tr>
<tr>
<td>Insect bite</td>
<td>3</td>
</tr>
</tbody>
</table>
5.1.5. Stakeholder views on symptoms and signs of DSCATT experienced by pregnant women

Stakeholders were asked their views on the symptoms and signs most commonly experienced by pregnant women presenting with systemic symptoms, with or without a history of tick bite and that are or have been attributed to DSCATT. There were 30 Sli.do responses.

A common view expressed by stakeholders at the Think Tank was that symptoms experienced by pregnant women are usually very similar to those identified in Tables 1 and 2.

The following table (Table 3) lists the responses identified by stakeholders present at the Think Tank as the signs and symptoms experienced by pregnant women, noting that some of those identified by stakeholders were not signs or symptoms. Some of the signs or symptoms identified affect babies rather than pregnant women.

Table 3: Signs and symptoms identified by stakeholders as being experienced by pregnant women

<table>
<thead>
<tr>
<th>Sign or symptom identified</th>
<th>Responses</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fatigue</td>
<td>3</td>
</tr>
<tr>
<td>Congenital transmission without treatment</td>
<td>3</td>
</tr>
<tr>
<td>Miscarriages</td>
<td>3</td>
</tr>
<tr>
<td>Onset of extreme allergies</td>
<td>2</td>
</tr>
<tr>
<td>Birth defects</td>
<td>2</td>
</tr>
<tr>
<td>Immune suppression</td>
<td>2</td>
</tr>
<tr>
<td>Muscle weakness</td>
<td>2</td>
</tr>
<tr>
<td>Insomnia; bladder issues; candida overgrowth in gut; tachycardia; onset of “atypical” immune disorders; children born with autism; joint pain; neuropathy; higher risk of caesarean birth due to neonate encephalitis</td>
<td>1 each</td>
</tr>
</tbody>
</table>
5.2. Session 2: Diagnosable diseases and disorders to be excluded before a patient is considered for DSCATT Clinical Pathway

This session was presented and led by Dr Virginia Hope, Expert Medical Technical Advisor.

5.2.1. Overview and objectives of session 2

Dr Hope introduced the session by explaining that a minimum requirement for the Clinical Pathway is to assist with a differential diagnosis, including the ruling out of obvious diagnosable conditions, such as Lyme disease, other tick-borne illnesses and other obvious chronic debilitating conditions. The health professional has a duty of care to ensure that other illnesses are not overlooked.

Dr Hope presented the objectives of the session as in Figure 3 below.

Figure 3: Objectives of Session 2

To inform the discussion Dr Hope presented publicly available information\(^4\), including guidance on persistent non-specific symptoms to be considered in differential diagnosis of Lyme disease reported by Public Health England in the UK, submissions by ACIIDS and Lyme Disease Association of Australia (LDAA) to the Senate Inquiry, and information from papers by Brown (2018)\(^5\) and Chalada et al. (2016)\(^6\).

\(^4\) Presented on pages 35-38 of this report.
5.2.2. **Stakeholder views on diagnosable diseases and disorders to exclude**

All stakeholders were asked to identify the diagnosable diseases and disorders that should be excluded after a patient presents with systemic symptoms, with or without a history of tick bite, and to add any additional diseases or disorders if they need to be considered further.

Many stakeholders at the Think Tank expressed the view that DSCATT should not be considered by exclusion of other diagnoses because co-morbidities are common and diagnosis of one disease should not exclude DSCATT.

Many stakeholders wanted to ensure that patients with other diseases are not misdiagnosed as having a tick-borne disease, and equally important, that patients with tick-borne illnesses are not misdiagnosed as having other diseases.

5.2.3. **Stakeholder views on the diseases and disorders most commonly experienced by adult patients, child patients and pregnant women**

Stakeholders made the following additions to the list of infections reported by LDAA: Periodic Fever, Aphthous stomatitis, Pharyngitis, Adenitis (PFAPA), Autoimmune disease, Legionella, Sexually transmitted infections (STIs), Varicella-Zoster Virus (VZV), and Mast Cell Activation Disorder (MCAD) – often brought on by inflammation due to long term infection or chronic inflammatory response syndrome/mould issues as well as ongoing allergy and underlying immune system dysfunction.

Stakeholders also added Syphilis and Leptospirosis to the list of other diagnoses by ACIIDS.

There was no consensus on the diseases and disorders most commonly experienced by adult patients, child patients and pregnant women, apart from those identified in the questions on signs and symptoms, including: cluster headaches; myocarditis; Lyme carditis; erythema migrans; Bell’s palsy; encephalitis; multiple sclerosis; amyotrophic latera sclerosis (ALS); Lyme psychosis, osteomyelitis; atypical seronegative autoimmune disease; cherry angiomas; Borrelia Lymphocytoma; acrodermatitis chronica atrophicans (ACA); and autism.

---

7 See list on page 35 of this report.
8 See list on page 37 of this report.
5.3. **Session 3: The ideal patient journey**

This session was presented and led by Ms Catherine Marshall, Independent Guideline Advisor and Expert Guidelines Technical Advisor on the *Allen + Clarke* project team.

5.3.1. **Overview and objectives of session 3**

Ms Catherine Marshall presented an overview of the common elements of clinical pathways, and a brief overview of what is already known about what patients want from a pathway. She presented the objectives of the session as presented below in Figure 4.

**Figure 4: Objectives of Session 3**

The session was organised in a café style rotation. A designated leader for each part of the pathway rotated around the tables to collect views on the identified topic to add to those contributed by groups at previous tables. Online stakeholders were invited to participate in a group discussion facilitated by one of the *Allen + Clarke* project team facilitators (Ms May Guise). Views were then presented back in a plenary session with a summary of key messages from online discussion communicated via Ms Guise.

All stakeholders present were asked to discuss the core primary care and specialist services that the DSCATT Clinical Pathway should cover at each of the four stages of clinical care as presented in Figure 5 below (in public and private settings) and identify any differences in services required for children, pregnant women or people living in rural and remote areas.
The key points raised by stakeholders are presented below.

5.3.2. Stakeholder views on assessment, screening and diagnosis

Assessment
Stakeholders expressed the view that the preferred first point of contact was the patient’s General Practitioner (GP) for a person presenting with new onset or unresolved debilitating symptoms (with or without a history of tick bites.)

Diagnostic testing
While there were many views expressed about diagnostic testing during acute and chronic illness, and among children and pregnant women, there was no consensus reached by stakeholders about diagnostic testing.

Diagnosis
Stakeholders acknowledged that diagnoses by medical practitioners needed to be based on consideration of patient history and pathology. Some stakeholders expressed concerns that, in their view, they doubt the reliability of pathology testing.

5.3.3. Stakeholder views on treatment and management

While there were many views expressed about treatment, stakeholders at the Think Tank expressed the view that any treatment pathway should be underpinned by a clear diagnosis.

Regarding treatment plans for patients with chronic symptoms attributed to DSCATT, many stakeholders expressed the view that:

- patients should be treated specifically for symptoms and conditions using an appropriate treatment for the underlying causative organism, disease process or symptomatology, which may not be bacterial; and
- regular check-ups to monitor progress should be provided.
Most stakeholders at the Think Tank felt that it is important to recognise chronic illness as a long-term disability and that the treatment goal is to minimise disability and maximise function in order to improve patient outcomes.\(^9\)

Many stakeholders also felt that any treatment pathway should consider the ability of patients living in rural and remote areas to travel and access treatment and management programs; and the focal point must be working with GPs to recognise and treat DSCATT.

5.3.4. **Stakeholder views on specialist referral**

The majority of stakeholders at the Think Tank expressed the view that:

- the GP is best placed to lead the care, with specialists brought in ancillary to the GP when they need advice on particular areas;
- referral to specialists should not be automatic and should only be done where the GP needs specialist advice;
- appropriate referral will depend on the particular signs and symptoms experienced by each patient; and
- any multi-disciplinary team should not be restricted to conventional specialists. Alternative practitioners may also be useful.

5.3.5. **Stakeholder views on recovery and self-management**

Stakeholders noted that it is important to define what successful treatment and care might include, as success may not be full recovery/remission. The goal may just be to maximise function and look for ways that people can reintegrate and manage their own lives as much as possible. Defining success will be very personal for each patient. For most patients, the goal will be to improve their quality of life as much as possible.

The majority of stakeholders expressed the view that a personalised integrated self-management plan may be useful, and the planning may need to involve supporters, carers or families. Stakeholders expressed concern about access to some treatments, including the cost of some treatments.

5.3.6. **Further stakeholder views on the patient journey**

Generally, stakeholders expressed the view that there needs to be more information on DSCATT, and that research can be informed by data capture and surveillance from each stage of the clinical journey. Monitoring of patient outcomes will also provide useful information going forward.

Stakeholders felt that education of medical practitioners is important, as is public education, including parents and schools, regarding dealing with tick bites and how to remove ticks safely.

---

5.4. **Session 4: Health practitioners and skills required**

Ms Marion Clark from the *Allen + Clarke* project team presented and led this session.

5.4.1. **Overview and objectives of the session**

The session was significantly reduced in length to reflect the fact that most of the objectives, presented below, had already been well canvassed. Ms Clark introduced the objectives of this session as in Figure 6 below.

![Figure 6: Objectives of Session 4](image)

5.4.2. **Stakeholder feedback**

Commonly expressed views among the stakeholders were:

- responsibility for initial diagnosis should be with the GP or emergency care physician with referral or advice from relevant medical specialists when necessary;
- treatment and management should be led by the patient’s GP with referral or advice from medical specialists or other health practitioners as necessary; and
- in general, a GP should look after the patient throughout the treatment / care journey and refer to specialists as needed.
5.5. **Closing session**

Before the Think Tank closed, stakeholders were invited to comment further on DSCATT and the Clinical Pathway in an open plenary session.

It was noted that the National Health and Medical Research Council (NHMRC) has recently approved funding for research into DSCATT. Stakeholders discussed the research and raised issues relating to testing methods with some of the researchers who were present. They supported a collaborative approach across the studies to ensure that resources were used efficiently to gain the most information from the research.

Finally, Mr Paul Houliston from *Allen + Clarke* outlined the process for the development of the Clinical Pathway following the Think Tank, including plans for a further consultation round with stakeholders, with the opportunity to provide feedback.

Figure 7: Process for development of DSCATT Clinical Pathway

The Think Tank closed at 4.30 pm.
APPENDIX 1: LIST OF THINK TANK PARTICIPANT ORGANISATIONS

Table 4: Stakeholder organisations represented (in person)

<table>
<thead>
<tr>
<th>Organisation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Australian College of Nutritional and Environmental Medicine</td>
</tr>
<tr>
<td>Australian Infectious and Inflammatory Disease Society (ACIIDS)</td>
</tr>
<tr>
<td>Canberra Area Lyme Disease Support Group</td>
</tr>
<tr>
<td>Chrysalis CFS/ME and Lyme Support</td>
</tr>
<tr>
<td>Gold Coast Patient Support</td>
</tr>
<tr>
<td>Hunter Region MSIDS</td>
</tr>
<tr>
<td>Karl McManus Foundation</td>
</tr>
<tr>
<td>Lyme Australia Recognition and Awareness</td>
</tr>
<tr>
<td>Lyme Disease Association of Australia (LDAA)</td>
</tr>
<tr>
<td>LDAA/ NSW Far South Coast Lyme Group</td>
</tr>
<tr>
<td>Lyme Victoria</td>
</tr>
<tr>
<td>MS/CFS/FM Support Association QLD</td>
</tr>
<tr>
<td>National Health and Medical Research Council (NHMRC)</td>
</tr>
<tr>
<td>NSW Far South Coast Lyme Group</td>
</tr>
<tr>
<td>NSW Riverina Lyme Support Group</td>
</tr>
<tr>
<td>Private individual – health practitioner</td>
</tr>
<tr>
<td>Royal Australian and New Zealand College of Psychiatrists</td>
</tr>
<tr>
<td>Royal College of Pathologists of Australasia</td>
</tr>
<tr>
<td>Royal North Shore Hospital</td>
</tr>
<tr>
<td>Sarcoidosis Lyme Australia</td>
</tr>
<tr>
<td>Therapeutic Guidelines Limited</td>
</tr>
</tbody>
</table>
Table 5: Stakeholder organisations represented (online)

<table>
<thead>
<tr>
<th>Organisation</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACT Health Directorate</td>
</tr>
<tr>
<td>Consumers Health Forum of Australia</td>
</tr>
<tr>
<td>Department of Health Tasmania</td>
</tr>
<tr>
<td>Health Pathways Capital Health Network</td>
</tr>
<tr>
<td>Independent Patient Advocate</td>
</tr>
<tr>
<td>Lyme Australia and Friends Group</td>
</tr>
<tr>
<td>ME/CFS and Lyme Association of WA Inc</td>
</tr>
<tr>
<td>Medical practitioner, Perth</td>
</tr>
<tr>
<td>Multiple Systemic Infectious Disease Syndrome Inc. (MSIDS Inc.)</td>
</tr>
<tr>
<td>The Kojonup Lyme Supporters Association Inc.</td>
</tr>
<tr>
<td>Tick Awareness Australia</td>
</tr>
<tr>
<td>Toxic Mould Support Australia</td>
</tr>
<tr>
<td>VIC Lyme Support</td>
</tr>
</tbody>
</table>

Four Department of Health representatives attended in person, as observers.

Nine *Allen + Clarke* representatives attended in person as facilitators. Speakers representing *Allen + Clarke* at the Think Tank are listed in the agenda.
APPENDIX 2: THINK TANK PRESENTATION

DSCATT Clinical Pathway Think Tank
8 May 2019

Welcome to country
Uncle Chicka Madden
Opening address

DSCATT Clinical Pathway Think Tank

Introducing Allen + Clarke

Allen + Clarke is a public policy consulting firm with offices in Melbourne, and Wellington New Zealand. We are trusted advisors to the public sector, business and NGOs, and have extensive experience working in public health.

DSCATT Clinical Pathway project team

- Paul Houlston, MPhil
  - Project Sponsor
- Dr Robyn Halsman-Welsh, PhD (Oral Microbiology), BDS
  - Project Lead
- Dr Virginia Hope, MNZM BHB, MBChB, Dip Comm H, MPhil (Hons), FAFPHM, FNZCPHM, FRACMA
  - Medical Expert Advisor
- Catherine Marshall, BA, Post Grad Cert H Econ
  - Guidelines Expert Advisor
- Marion Clark, RN, BA (Soc. Sci), MPP
  - Lead Analyst
- May Guise, GradCert (Management), BA (Hons)/BCA
  - Project Manager
- Stephanie James, BSc (Biotechnology), LLB
  - Analyst

Sil.do #DSCATT
Developing a clinical pathway and multidisciplinary care model for Australian patients suffering from debilitating symptom complexes attributed to ticks (DSCATT)

Project Overview
Dr Robyn Haisman-Welsh, PhD
Project Lead

“The Australian Government is currently working with key stakeholders to investigate an evidence-based and flexible multidisciplinary care model that can be applied in both private and public healthcare settings.”

Australian Government Position Statement: Debilitating Symptom Complexes Attributed to Ticks, June 2018
THE OVERALL PROJECT
OBJECTIVE IS TO DEVELOP AN EVIDENCE-BASED CLINICAL PATHWAY AND MULTIDISCIPLINARY CARE MODEL FOR PATIENTS SUFFERING FROM DEBILITATING SYMPTOM COMPLEXES ATTRIBUTED TO TICKS (DSCATT)

TODAY’S THINK TANK
IS A KEY INPUT TO DEVELOPING A DRAFT CLINICAL PATHWAY FOR PATIENTS SUFFERING FROM DSCATT

PRINCIPLES
\- INCLUSIVITY
\- RECEPTIVITY
\- RECIPROCITY
\- RESPECT
\- TIMELINESS
\- TRANSPARENCY

Clinical Pathway minimum requirements

1. Assist with a differential diagnosis
   Including the ruling out of obvious diagnosable conditions, including classical Lyme disease, other tick-borne illnesses and other obvious chronic debilitating conditions.

2. Determine the composition of a multidisciplinary care approach or multidisciplinary care team (MDT)
   The skill mix required to comprehensively assess patients once obvious diagnosable conditions have been ruled out.

3. Provide advice on when a patient should be referred to a multidisciplinary care approach or MDT
   E.g., the nature/duration of particular symptoms, absence of diagnosis from prior tests, diagnoses previously being considered and excluded prior to referral to MDT.

4. Incorporate an agreed primary care management plan for those patients without a diagnosis
   That includes relevant ongoing support from their GP, allied health, and/or clinical specialists.

5. Be flexible enough to be incorporated into existing public and private health care systems.

Sil.do #DSCATT
DSCATT Clinical Pathway Development

<table>
<thead>
<tr>
<th>Evidence assessment + Initial engagement</th>
<th>Development + further consultation</th>
<th>Refine and finalise for AHMAC</th>
</tr>
</thead>
<tbody>
<tr>
<td>Integrative Literature Review</td>
<td>Develop draft Clinical Pathway</td>
<td>Refine pathway</td>
</tr>
<tr>
<td>Think Tank Consultation + Think Tank Report</td>
<td>Consultation Brisbane, Sydney, Canberra, Melbourne, Perth + virtual options</td>
<td>AHPPC and CPC decision</td>
</tr>
</tbody>
</table>

March – May 2019  June  July / August  Sep 2019 – Feb 2020

‘The need for care is real, the symptoms people experience are real and it is essential that patients receive care that is both evidence-based and compassionate’

Prof Brendan Murphy, CMO, Patient Group Forum July 2018
“Many of these patients experiencing debilitating symptom complexes are living in turmoil as their illness is poorly understood, making accurate diagnosis and treatment difficult.

It is imperative for government health authorities, clinicians and patients alike to remain open minded as to the causes of these symptoms and work together to achieve a patient-centred multidisciplinary approach to their care.”

Australian Government Position Statement: Debilitating Symptom Complexes Attributed to Ticks, June 2018
Session 1
Objectives

- Develop a mutually acceptable list of acute and chronic symptoms and signs that are or have been associated with DSCATT to inform decision-making and pathways
- Come to a mutually acceptable decision on the minimum number of symptoms that would trigger a referral to the DSCATT pathway
- Come to a mutually acceptable decision on the clinical signs and symptoms most and less commonly experienced by adult patients, child patients and pregnant women

Sil.do #DSCATT

Symptoms and signs

- Symptoms are subjective and experienced by patients e.g. headache, back pain or fatigue
- Signs are objectively observable e.g. high blood pressure, rash or cough
- Often used inter-changeably
- Sometimes mixed use in Lyme Disease and related literature

Sil.do #DSCATT
### Symptoms reported by patients to Senate Inquiry

<table>
<thead>
<tr>
<th>&gt;45%*</th>
<th>20-45%*</th>
<th>&lt;20%*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fatigue -66.6%</td>
<td>Headache -44.5%</td>
<td>Palpitations -18.3%</td>
</tr>
<tr>
<td>Disordered thinking (‘brain fog’, ‘memory loss’ or loss of mental acuity -55.2%)</td>
<td>Myalgias -36.6%</td>
<td>Insomnia -18.0%</td>
</tr>
<tr>
<td>Sensory disturbance - 49.1%</td>
<td>Rash -34.1%</td>
<td>Seizures -16.0%</td>
</tr>
<tr>
<td>Mood disturbance -29.7%</td>
<td>Diarrhoea -13.1%</td>
<td></td>
</tr>
<tr>
<td>Visual disturbance -27.7%</td>
<td>Tremor -13.0%</td>
<td></td>
</tr>
<tr>
<td>Dizziness -26.4%</td>
<td>Personality change -4.1%</td>
<td></td>
</tr>
<tr>
<td>Pain -25.6%</td>
<td>Fever -24.8%</td>
<td></td>
</tr>
<tr>
<td>Nausea -22.4%</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

18 symptoms identified as described by the patient

* % of patients who reported at least one symptom (n = 656)

698 submissions (Brown, 2018)

### Symptoms of Australian Lyme-like Illness (ACIIDS)

<table>
<thead>
<tr>
<th>Acute Lyme-like Illness</th>
<th>Chronic Lyme-like Illness</th>
</tr>
</thead>
<tbody>
<tr>
<td>Typically includes:</td>
<td>Most common symptoms:</td>
</tr>
<tr>
<td>• Fever</td>
<td>• fatigue</td>
</tr>
<tr>
<td>• fatigue</td>
<td>• headache</td>
</tr>
<tr>
<td>• headache</td>
<td>• muscle and joint pain</td>
</tr>
<tr>
<td>• joint pain and muscle pain</td>
<td>• cognitive impairment (“brain fog”), poor memory and concentration</td>
</tr>
<tr>
<td>• Some patients develop erythema migrans rash (EM)</td>
<td>Other symptoms can include:</td>
</tr>
<tr>
<td>• Occasionally encephalitis or meningitis</td>
<td>• sharp pains, numbness or pins and needles in the limbs, sensitivity to light and sound, sore throat, swollen glands, sleep disturbance, palpitations, limb weakness, muscle twitching, non-epileptic seizures, anxiety, depression, panic attacks, constipation, dizziness, vertigo, fainting episodes, double vision and tinnitus</td>
</tr>
</tbody>
</table>

Source: ACIIDS submission to Senate inquiry
# Signs of Australian Lyme-like Illness (ACIIDS)

<table>
<thead>
<tr>
<th>Acute Lyme-like Illness</th>
<th>Chronic Lyme-like Illness</th>
</tr>
</thead>
<tbody>
<tr>
<td>Can include:</td>
<td>• cranial and peripheral nerve signs</td>
</tr>
<tr>
<td>• fever</td>
<td>• ECG changes and arrhythmias, POTS</td>
</tr>
<tr>
<td>• skin rash</td>
<td>• acrodermatitis chronic atrophicans</td>
</tr>
<tr>
<td>• signs of acute neurological</td>
<td>• enlarged liver or spleen, gastroparesis, loaded colon</td>
</tr>
<tr>
<td>involvement, encephalitis or meningitis</td>
<td>due to slow transit constipation</td>
</tr>
<tr>
<td>(occasionally)</td>
<td>• swollen joints, muscle weakness, muscle tenderness and trigger points</td>
</tr>
</tbody>
</table>

Sources: ACIIDS submission to Senate inquiry

---

**Diagnosable diseases and disorders to be excluded before a patient is considered for DSCATT referral pathway**

**Session 2**

Dr Virginia Hope

---

32
Differential diagnosis

The Clinical Pathway will assist with a differential diagnosis; including the ruling out of obvious diagnosable conditions, including classical Lyme disease, other tick-borne illnesses and other obvious chronic debilitating conditions.

Australian diagnostic guideline for overseas acquired Lyme disease

Retrieved from Gary D Lim, Jennifer R Hood, Phil Wright. An Australian guideline on the diagnosis of overseas-acquired Lyme disease/Borreliosis.
Session 2 Objectives

Come to a mutually acceptable list of diagnoses and diseases that must be excluded

Come to a mutually acceptable decision on the diseases and disorders most commonly experienced by adult patients, child patients and pregnant women

Sil.do #DSCATT

Important exclusions

“It is particularly important to ensure that tumours, multiple sclerosis and motor neuron disease are not misdiagnosed as Lyme disease.”

https://www.gov.uk/guidance/lyme-disease-differential-diagnosis
Differential diagnosis – persistent non-specific symptoms

- CMV
- EBV
- hepatitis B or C
- HIV
- Syphilis
- toxoplasmosis
- unusual infections e.g. anaplasmosis, rickettsial disease, tick-borne encephalitis, Q fever
- auto-immune diseases including rheumatoid arthritis
- malignancy
- primary psychiatric disorders
- chronic fatigue syndrome, myalgic encephalomyelitis or fibromyalgia

https://www.gov.uk/guidance/lyme-disease-differential-diagnosis

Infections reported (LDAA)

- Borrelia
- Bartonella
- Babesia
- Rickettsia
- Mycoplasma spp
- Ross River Virus (RRV) Disease
- Chlamydia Pneumoniae (CPN)
- Epstein-Barr Virus (EBV)
- Ehrlichia
- Typhus
- Barmah Forest Virus (BFV)
- Cytomegalovirus (CMV)
- Q Fever
- Coxsackie
- Blastocystis
- HSV/Zoster
- Parvovirus
- Streptococcus
- Toxoplasmosis
- Diarrhoea
- Anaplasma
- Brucella
- Equine Morbillivirus Disease (EMV)
- Other

Based on data from LLDA Submission 528, May 2016
Infections - LDAA

Have you been diagnosed with any co-infections?

- Bartonella
- Babesiosis
- Mycoplasma
- Chlamydia Pneumoniae
- Rickettsia
- Ehrlichiosis
- Anaplasmosis
- Epstein Barr Virus
- Brucellosis
- Borrelia ONLY

Number of people (multiple responses) n = 894

Based on data from LDAA Submission 528, May 2016

Co-existing disease

...one in ten (73, 10.5%) of the total patients reported another diagnosis that could explain their physical symptoms including

- 23 who reported multiple sclerosis (MS)
- 19 who reported rheumatoid arthritis (RA)
- 10 who reported systemic lupus erythematosus (SLE)
- 7 who reported Crohn’s disease
- 4 who reported motor neurone disease (MND), and
- 14 patients who reported ‘Other’.

Four patients reported more than one diagnosis.

- Brown’s analysis of first-person submissions made to the Senate Inquiry by people who self-identified as having Lyme disease in Australia
ACIIDS – other diagnoses

- Multiple sclerosis
- Amyotrophic lateral sclerosis (ALS)
- Parkinson’s disease
- Alzheimer’s disease
- Chronic Fatigue Syndrome
- Fibromyalgia
- Rheumatoid arthritis
- Polymyalgia rheumatica
- Polymyositis
- Autism
- Complex regional pain syndrome

Other illnesses and disorders - LDAA

Have you been diagnosed with any other conditions?

- Psychological disorder
- Hormonal Imbalance
- Hashimoto’s Thyroiditis
- Multiple Sclerosis
- Attention Deficit Hyperactivity Disorder
- Autism or Asperger Syndrome
- Motor Neurone Disease

Based on data from LDAA Submission 528, May 2016
Diagnoses provided by medical professionals from 349 submissions

- Depression – 42
- Fibromyalgia – 42
- Multiple Sclerosis – 28
- Anxiety – 21
- Mental disorder – 18
- Epstein-Barr Virus (EPV) – 16
- Adrenal fatigue – 13
- Chronic fatigue syndrome / myalgic encephalomyelitis – 8 (CFS/ME)

Chalada, Stenos and Bradbury

- Infections
  - Australian Rickettsioses
  - Babesiosis
  - Q Fever (Coxiella burnetii)
  - Bartonella
  - Candidatus neoehrlichia
- Other
  - Fibromyalgia
  - CFS
  - Multiple sclerosis
  - Delusional parasitoses

Chalada, Stenos and Bradbury. Is there Lyme-like disease in Australia? Summary of the findings to date. One Health 2 2016 42-54.
What would the ideal patient journey look like?

Session 3
Catherine Marshall

Session 3 Objectives

Agree on the services that are required to meet the immediate and ongoing clinical care and support needs of patients with DSCATT throughout their patient journeys.

Sil.do #DSCATT
What are Clinical Pathways?

- **Evidence-based** tool – care map
- Aimed at **standardising** care
- Describes the standard **clinical decisions** along the patient journey
- Identifies where **different pathways** are required (e.g., adults/children)
- Translates the evidence in a way that reflects **local services** (e.g., public/private – rural/urban)

**ACSQHC Definition of Person-centred Care**

"Person-centred care is **respectful of, and responsive to, the preferences, needs and values of patients and consumers.** Key dimensions include:

- respect
- emotional support
- physical comfort
- information and communication
- continuity and transition
- care coordination
- access to care and
- partnerships with patients, carers and family in the design and delivery of care".


**Sil.do #DSCATT**
What consumers and their representatives have said they want (Senate Enquiry and previous Forums)

- Acceptance of the symptoms
- Supportive, consistent treatment
- To be dealt with quickly
- Support along the whole journey
- Holistic assessment
- Access to affordable, reliable treatments
- Fully informed consent to the full range of treatment options
- High priority care for children and babies
- Accessible services

Stages of Clinical Care – general example

- Screening, assessment and diagnosis
- Treatment and management
- Recovery and self-management
- Specialist referral
What health practitioners and skills are required?

Session 4
Marion Clark

Session 4 Objectives

Agree which regulated health professions, specialties and the skill sets are required to best meet the immediate and ongoing clinical, care and support needs of patients

Agree the skills needed for each stage of the patient journey. (Screening, assessment and diagnosis, treatment and management, ongoing support for recovery)

Discuss who should be responsible for the assessment and diagnosis

Discuss at what stage the patient with DSCATT should be referred to a specialist or multi-disciplinary team

Sli.do #DSCATT
Key points

- The scope of this session is on considering regulated professions in the multi-disciplinary team.

- This session builds on the discussions on the range of **signs and symptoms** experienced by patients with DSCATT (discussed earlier in Sessions 1 and 2) and the **services and care** required (discussed in Session 3).

### Symptoms reported by patients to Senate Inquiry

<table>
<thead>
<tr>
<th>&gt;45%*</th>
<th>20-45%*</th>
<th>&lt;20%*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fatigue - 66.6%</td>
<td>Headache - 44.5%</td>
<td>Palpitations - 18.3%</td>
</tr>
<tr>
<td>Disordered thinking ('brain fog', 'memory loss' or 'loss of mental acuity' - 55.2%)</td>
<td>Myalgia - 36.6%</td>
<td>Insomnia - 18.0%</td>
</tr>
<tr>
<td>Sensory disturbance - 49.1%</td>
<td>Rash - 34.1%</td>
<td>Seizures - 16.0%</td>
</tr>
<tr>
<td>18 symptoms identified as described by the patient</td>
<td>Mood disturbance - 29.7%</td>
<td>Diarrhoea - 13.1%</td>
</tr>
<tr>
<td>*% of patients who reported at least one symptom (n = 656)</td>
<td>Visual disturbance - 27.7%</td>
<td>Tremor - 13.0%</td>
</tr>
<tr>
<td>698 submissions (Brown, 2018)</td>
<td>Dizziness - 26.4%</td>
<td>Personality change - 4.1%</td>
</tr>
<tr>
<td>Pain - 25.6%</td>
<td>Fever - 24.8%</td>
<td>Nausea - 22.4%</td>
</tr>
</tbody>
</table>
What skills and practitioners are needed to deliver the services?

1. Primary care?
2. Care coordination/case management?
3. General medicine?
4. Pathology (laboratory testing)?
5. Neurology?
6. Rheumatology?
7. Psychological/mental health support for long term chronic illness?
8. Physiotherapy?
9. Paediatrics?
10. Obstetrics/Midwifery?
11. Other?
Next Steps

The Sli.do event will be kept open until Wednesday 15th of May, so feel free to keep adding thoughts.

Further stakeholder consultation will take place in July and August - everyone will be invited.

DSCATT Clinical Pathway Development

<table>
<thead>
<tr>
<th>Evidence assessment + initial engagement</th>
<th>Development + further consultation</th>
<th>Refine and finalise for AHMAC</th>
</tr>
</thead>
<tbody>
<tr>
<td>Integrative Literature Review</td>
<td>Develop draft Clinical Pathway</td>
<td>Refine pathway</td>
</tr>
<tr>
<td>Think Tank Consultation + Think Tank Report</td>
<td>Consultation Brisbane, Sydney, Canberra, Melbourne, Perth + virtual options</td>
<td>AHPPC and CPC decision</td>
</tr>
<tr>
<td>March – May 2019</td>
<td>July / August</td>
<td>Sep 2019 – Feb 2020</td>
</tr>
</tbody>
</table>

Sli.do #DSCATT