CARI GUIDELINES
CARING FOR AUSTRALIANS & NEW ZEALANDERS WITH KIDNEY IMPAIRMENT

THE UNIVERSITY OF SYDNEY

REDUCING THE EVIDENCE-PRACTICE GAP – EXPANSION AND IMPLEMENTATION OF LIVING GUIDELINES

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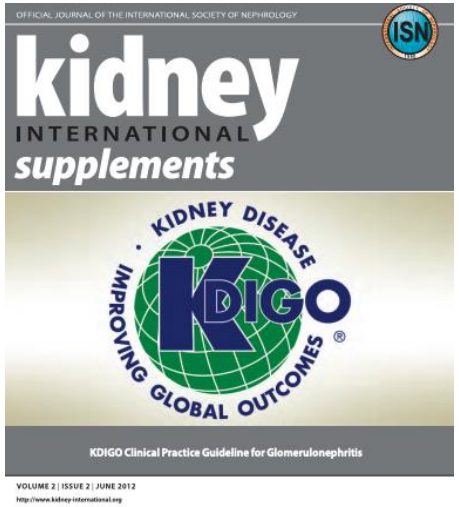
Traditional guidelines models can't keep up

Guidelines are monoliths – Usually focused on entire disease

- Comprehensive - Diagnosis, monitoring, and management
- Median currency of guidelines – 60 months
- KDIGO – 2021 GD guideline update – 4 years to develop



Time lags in implementation of clinical research	
Median 8 years for RCTs to be cited in guidelines	10 – 20 years for implementation into practice

	Chronic kidney disease	Dialysis	Transplant
Current guidelines	6 guidelines 52 subtopics	5 guidelines 28 subtopics	3 guidelines & 30 subtopics
Out of date guidelines	5 guidelines 20 subtopics	4 guidelines 19 subtopics	1 guideline 4 subtopics

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Partnering to rapidly incorporate new trials

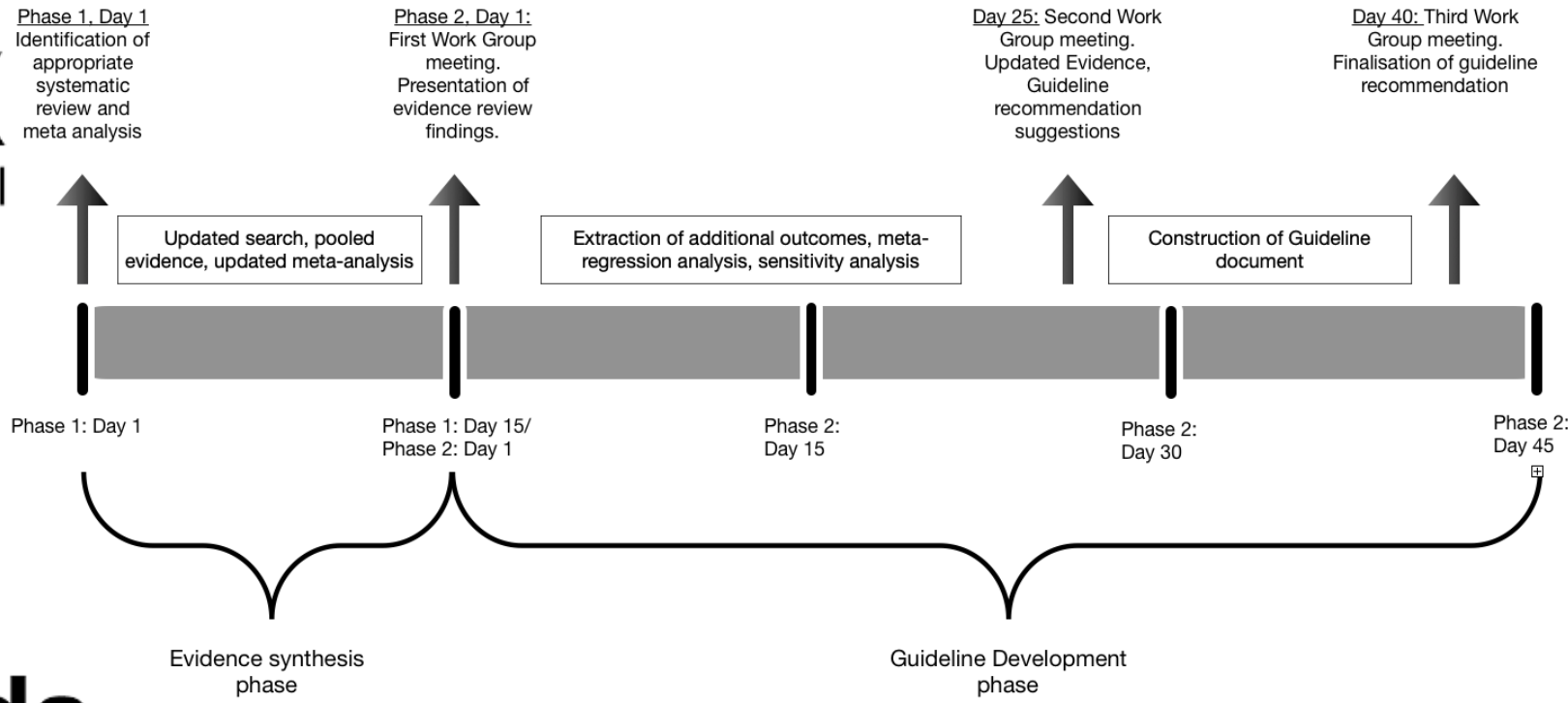
Rapidly update existing systematic reviews to inform updated guidelines.

- Partnership with AKTN – careful COIs management

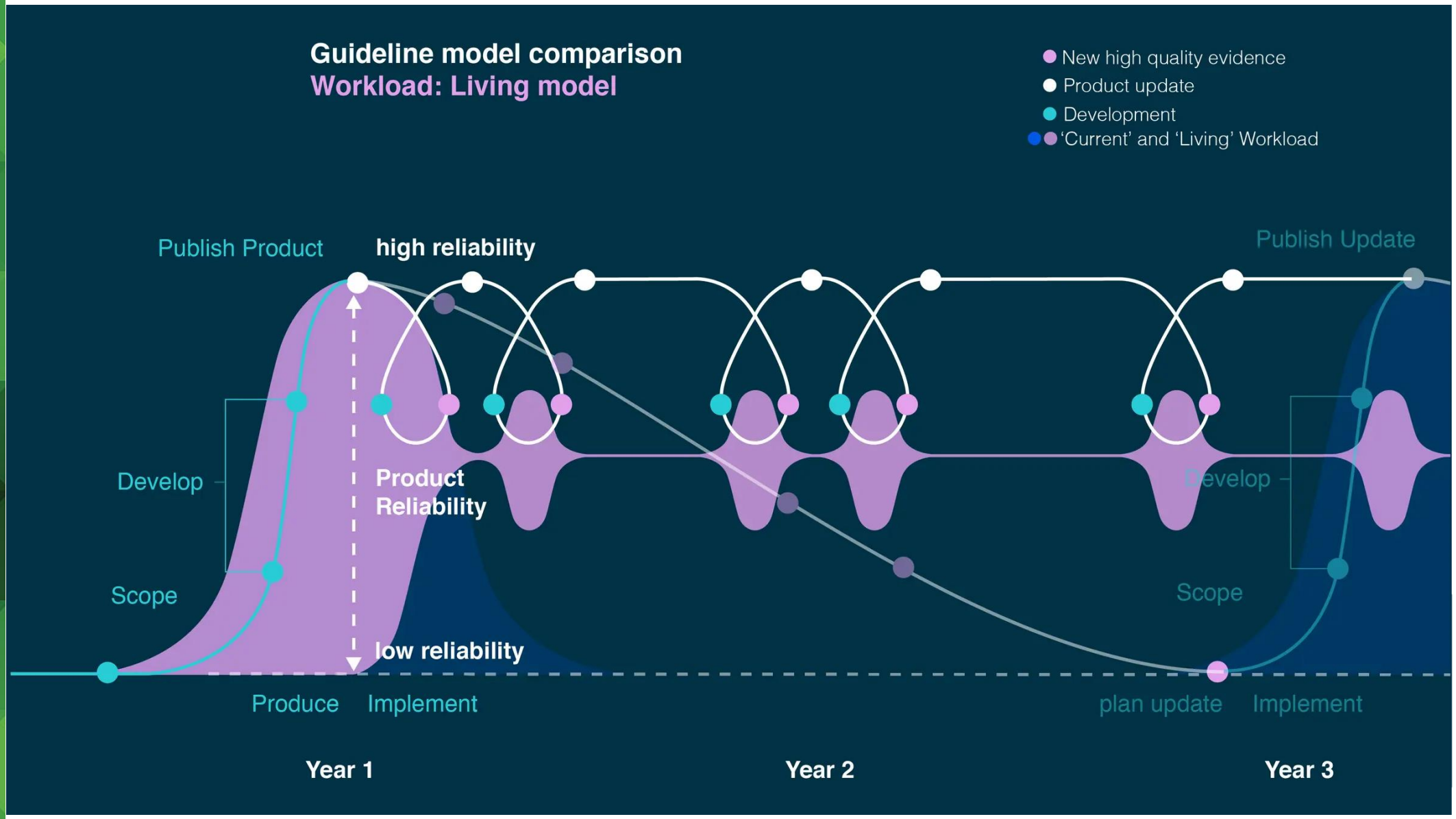
The CKD-FIX AKTN 10.02 trial

PREVENT ADPKD

The BEST-Fluids AKTN 15.02 trial



Guideline recommendations expeditiously and continually updated while maintaining the methodological rigour of guidelines.

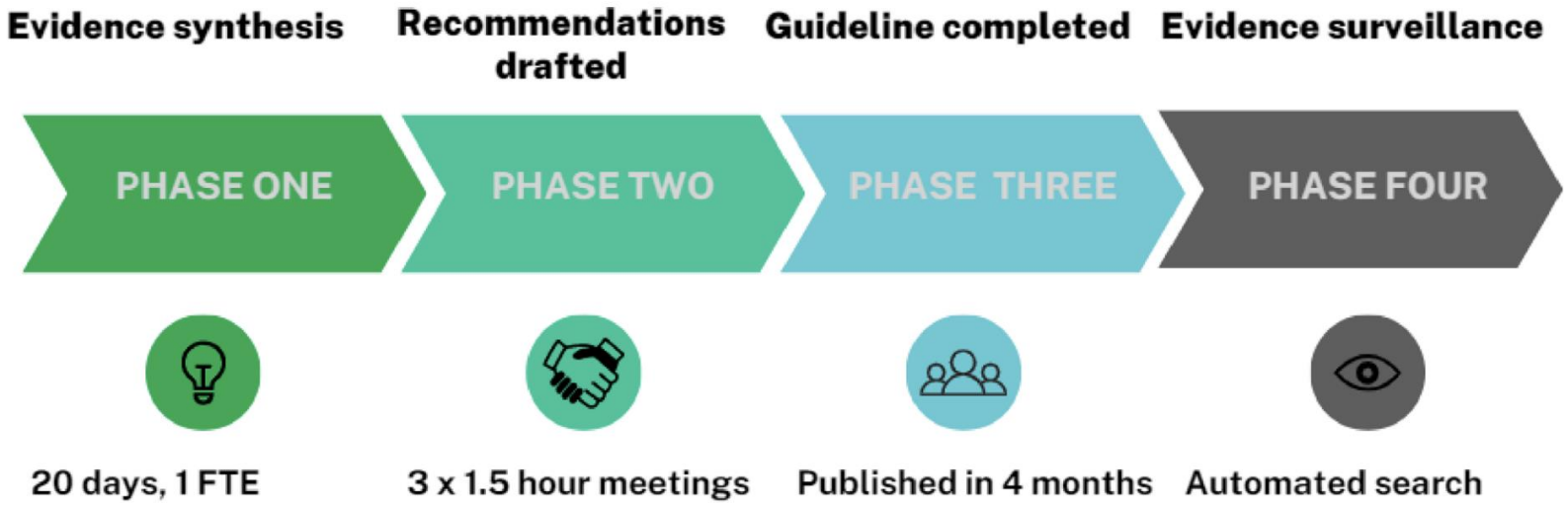


NATIONAL COVID-19 CLINICAL EVIDENCE TASKFORCE

Scope of pilot living kidney guidelines so far…

- Statins and ezetimibe in CKD
- Tolvaptan and fluid intake and ketogenic diets in ADPKD
- SGLT2 inhibitors in CKD - Utilised published SMART-C IPD meta-analysis

Monthly searches in Cochrane Kidney and Transplant Specialised Registry

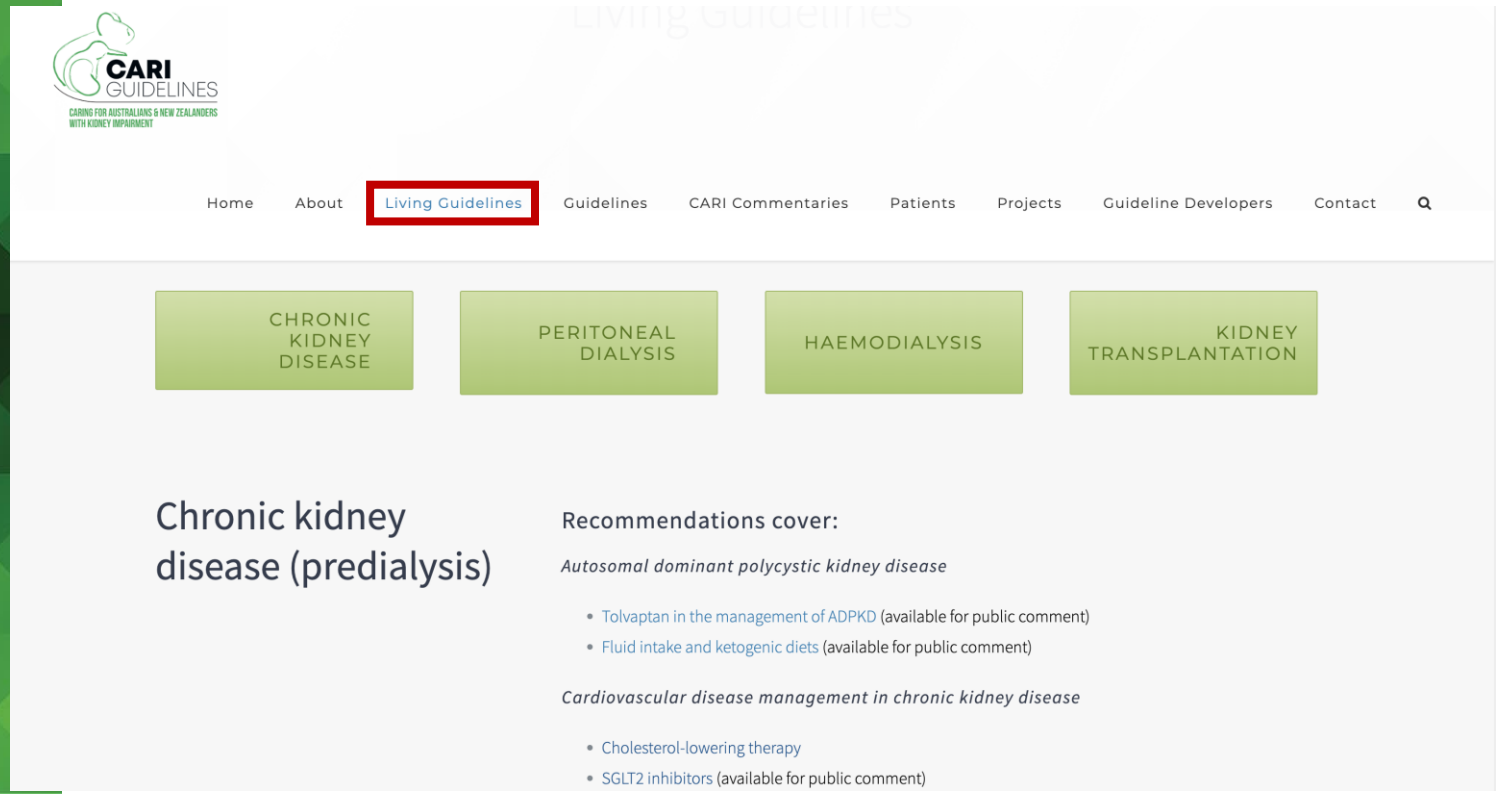


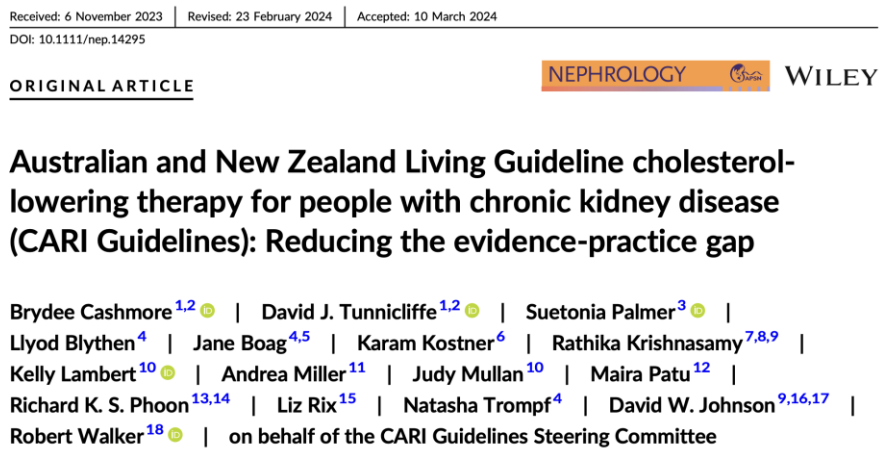
Cochrane Kidney and Transplant

ALEC Australian Living Evidence Collaboration

Publication model of living guidelines

- All accessible via the CARI website
- Online publishing platform – allows for publishing and direct links to evidence
- Summary publications in journal

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ORIGINAL ARTICLE
NEPHROLOGY
WILEY

Australian and New Zealand Living Guideline cholesterol-lowering therapy for people with chronic kidney disease (CARI Guidelines): Reducing the evidence-practice gap

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https://app.magicapp.org/#/guideline/Lpmozn/rec/E866qv

CARI Guidelines: Australian and New Zealand living guideline for chronic kidney disease

v2.0 published on 7/29/2024

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Sections

Minimize sections Subscribe PDF

1 Chronic kidney disease (predialysis)

1.1 Autosomal dominant polycystic kidney disease

1.2 Cardiovascular disease management in chronic kidney disease

1.2.1 Cholesterol-lowering therapy

1.2.2 SGLT2 inhibitors in the management of chronic kidney disease not requiring dialysis

1.2.3 GLP-1 Agonists (in development)

1.2.4 Non-steroidal mineralocorticoid antagonists (in development)

1.3 Urate-lowering therapy

Background

Chronic kidney disease (CKD) has an estimated prevalence of 10-13% worldwide [7][8], and is a growing burden on healthcare. Over 1.1 m...

Clinical trials have established the kidney and cardiovascular protective effects of SGLT2i in people with CKD [15]

More >

Strong recommendation

In review

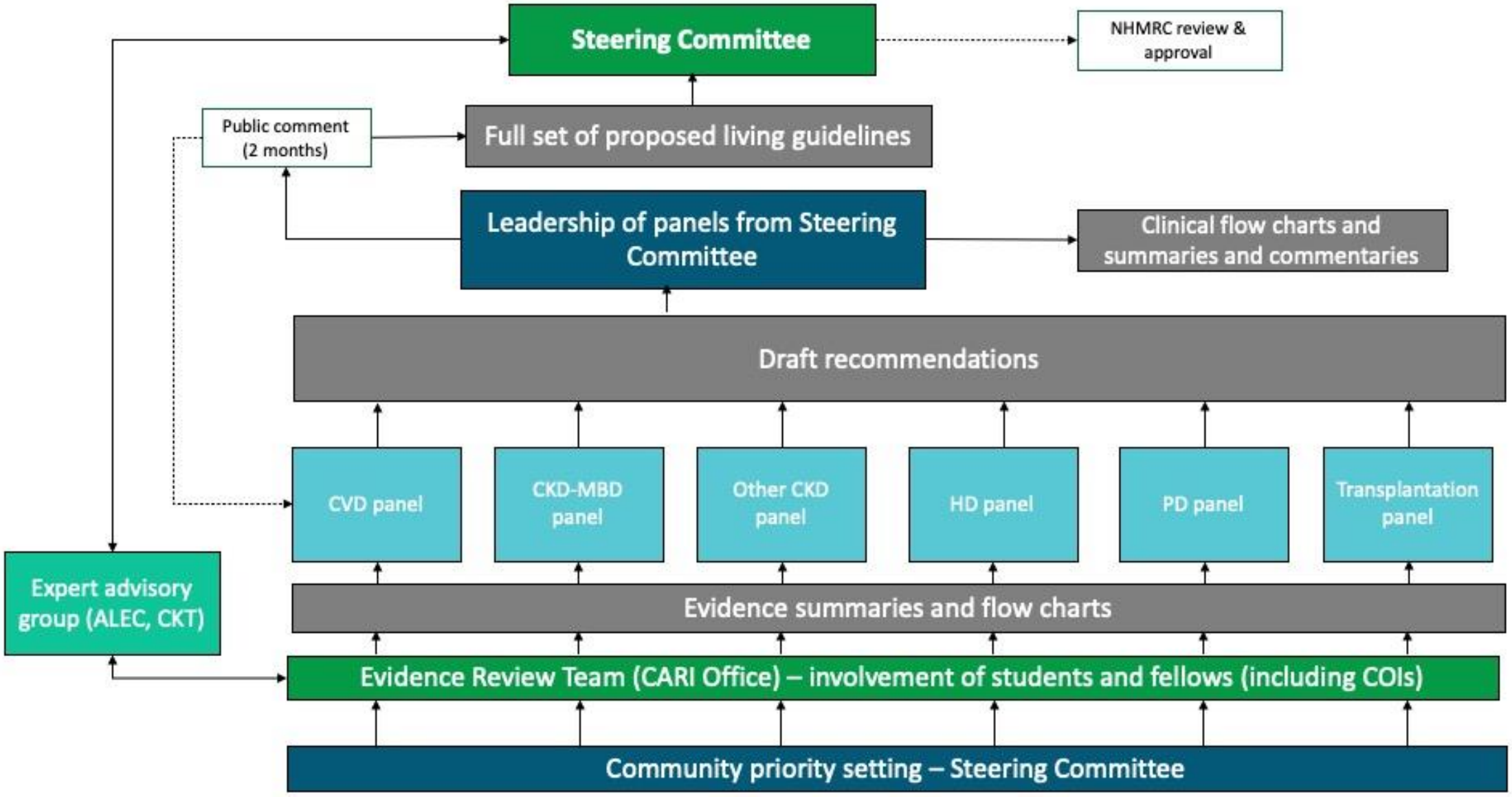
We recommend SGLT2 inhibitors in people with very high-risk chronic kidney disease (G3a (45-59 ml/min/1.73m2) & macroalbuminuria [A3] (>30 mg/mmol), G3b (30 - 44 ml/min/1.73m2) & microalbuminuria [A2] (3 - 30 mg/mmol), and G4 (<30 ml/min/1.73m2)) to reduce death, and adverse kidney and cardiovascular outcomes.

SGLT2i have demonstrated substantial benefits in reducing death, hospitalisation due to heart failure, kidney failure, and manageable harms in people with very high-risk CKD. However, there is limited reporting of patient-important outcomes, such as life participation, fatigue, and quality of life, across the trials. SGLT2i are also currently available via public subsidy in Australia for people with very high-risk CKD, with current. At present, SGLT2i are not publicly funded in New Zealand for non-diabetic kidney disease.

Research evidence (3) Evidence to decision Decision Aids Feedback

Expanding living kidney guidelines*

* Scope of panels TBD



How you can contribute?

- Members – diverse expertise, clinical (medical, allied health, nursing), lived-experience.
  - Focused – discussion during short meetings & voting, reviewing guideline drafts
  - 2-year terms – staggered for continuity

Preliminary scope of guideline panels

CKD	Peritoneal Dialysis (PD)	Haemodialysis (HD)	Kidney transplant
• Treatment to prevent progression • Education and self-management • Exercise & lifestyle factors	• Volume overload • Peritonitis (bacterial & Fungal) • Education & shared-decision making	• Fluid overload • Adverse event management • Management of common symptoms	• CVD management • Monitoring and management of immunosuppressive therapy • Pre-operative management

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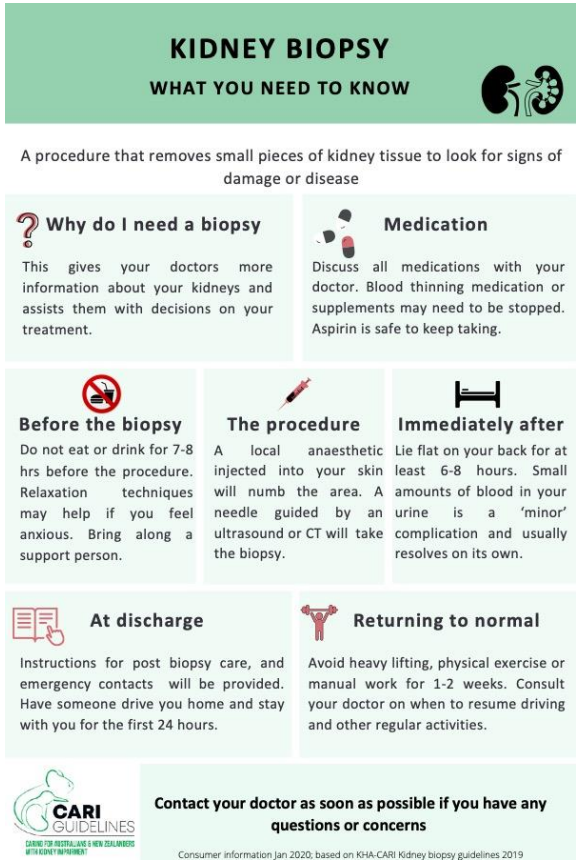
Improving implementation of CARI Guidelines

Better knowledge translation for consumers

- CARI has been a leader in consumer-involvement in guidelines
  - Across all aspects of guideline development
- Identify patient preferences and priorities
  - Produce more meaningful output to support shared decision-making
  - Evaluate impact on knowledge and self-efficacy



KIDNEY BIOPSY

WHAT YOU NEED TO KNOW

A procedure that removes small pieces of kidney tissue to look for signs of damage or disease

Why do I need a biopsy

This gives your doctors more information about your kidneys and assists them with decisions on your treatment.

Medication

Discuss all medications with your doctor. Blood thinning medication or supplements may need to be stopped. Aspirin is safe to keep taking.

Before the biopsy

Do not eat or drink for 7-8 hrs before the procedure. Relaxation techniques may help if you feel anxious. Bring along a support person.

The procedure

A local anaesthetic injected into your skin will numb the area. A needle guided by an ultrasound or CT will take the biopsy.

Immediately after

Lie flat on your back for at least 6-8 hours. Small amounts of blood in your urine is a 'minor' complication and usually resolves on its own.

At discharge

Instructions for post biopsy care, and emergency contacts will be provided. Have someone drive you home and stay with you for the first 24 hours.

Returning to normal

Avoid heavy lifting, physical exercise or manual work for 1-2 weeks. Consult your doctor on when to resume driving and other regular activities.

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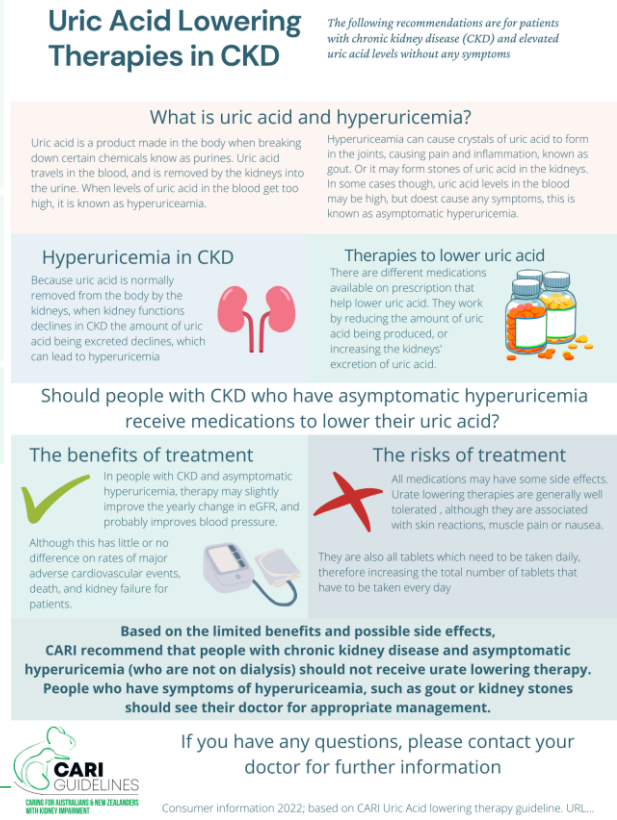
Contact your doctor as soon as possible if you have any questions or concerns

Consumer information Jan 2020; based on KHA-CARI Kidney biopsy guidelines 2019



Uric Acid Lowering Therapies in CKD

The following recommendations are for patients with chronic kidney disease (CKD) and elevated uric acid levels without any symptoms

What is uric acid and hyperuricemia?

Uric acid is a product made in the body when breaking down certain chemicals know as purines. Uric acid travels in the blood, and is removed by the kidneys into the urine. When levels of uric acid in the blood get too high, it is known as hyperuricaemia.

Hyperuricaemia can cause crystals of uric acid to form in the joints, causing pain and inflammation, known as gout. Or it may form stones of uric acid in the kidneys. In some cases though, uric acid levels in the blood may be high, but doest cause any symptoms, this is known as asymptomatic hyperuricemia.

Hyperuricemia in CKD

Because uric acid is normally removed from the body by the kidneys, when kidney functions declines in CKD the amount of uric acid being excreted declines, which can lead to hyperuricemia

Therapies to lower uric acid

There are different medications available on prescription that help lower uric acid. They work by reducing the amount of uric acid being produced, or increasing the kidneys' excretion of uric acid.

Should people with CKD who have asymptomatic hyperuricemia receive medications to lower their uric acid?

The benefits of treatment

In people with CKD and asymptomatic hyperuricemia, therapy may slightly improve the yearly change in eGFR, and probably improves blood pressure.

Although this has little or no difference on rates of major adverse cardiovascular events, death, and kidney failure for patients.

The risks of treatment

All medications may have some side effects. Urate lowering therapies are generally well tolerated , although they are associated with skin reactions, muscle pain or nausea.

They are also all tablets which need to be taken daily, therefore increasing the total number of tablets that have to be taken every day

Based on the limited benefits and possible side effects, CARI recommend that people with chronic kidney disease and asymptomatic hyperuricemia (who are not on dialysis) should not receive urate lowering therapy. People who have symptoms of hyperuriceamia, such as gout or kidney stones should see their doctor for appropriate management.

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If you have any questions, please contact your doctor for further information

Consumer information 2022; based on CARI Uric Acid lowering therapy guideline. URL...

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Implementation of living guidelines

- History of successful implementation projects

Iron targets in HD 2007

Vascular access 2011

PD peritonitis 2015

- Overcoming the Evidence-Practice Gap
  - Identifying barriers & facilitators and updating recommendations accordingly

ORIGINAL ARTICLE

Pragmatic Trial of Hospitalization Rate in Chronic Kidney Disease

Authors: Miguel A. Vazquez, M.D., George Oliver, M.D., Ph.D., Ruben Amarasingham, M.D., Venkatraghavan Sundaram, M. Pharm., Ph.D., Kevin Chan, M.D., Chul Ahn, Ph.D., Song Zhang, Ph.D., Perry Bickel, M.D., Samir M. Parikh, M.D., Barbara Wells, Ph.D., R. Tyler Miller, M.D., Susan Hedayati, M.D., M.H.S., Jeffrey Hastings, M.D., Adeola Jaiyeola, M.D., Tuan-Minh Nguyen, M.S., Brett Moran, M.D., Noel Santini, M.D., Blake Barker, M.D., Ferdinand Velasco, M.D., Lynn Myers, M.D., Thomas P. Meehan, M.D., Chester Fox, M.D., and Robert D. Toto, M.D., for the ICD-Pieces Study Group* -16 Author Info & Affiliations

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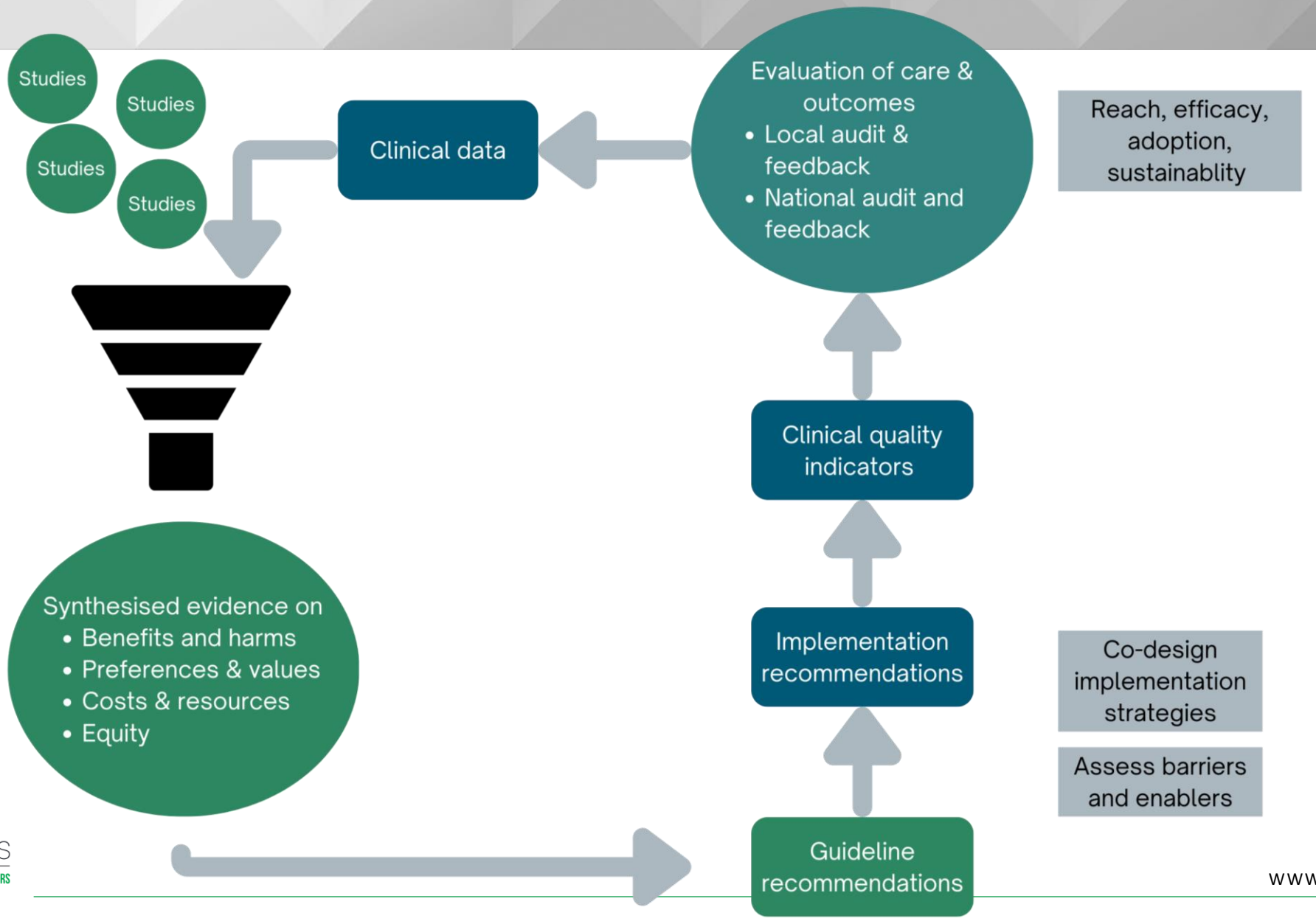
Evaluating impact on care & outcomes



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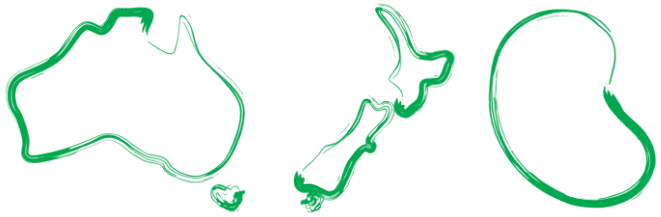
Thank you



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EOIs to be involved