My interests

Executive Director

Lead, Evidence Systems

Chair, Executive Committee

Co-founder, CEO

Infectious Diseases Physician

Senior Research Fellow
Evidence-based practice

Systematic Reviews and Clinical Practice Guidelines Improve Healthcare Decision Making

We need better evidence and guidance to make informed healthcare choices.

Define Clinical Problem

Assemble Multidisciplinary Team

DEVELOPMENT OF SYSTEMATIC REVIEWS

Identify, Assess, and Synthesize Evidence

Produce Systematic Review Report

Acquire Systematic Reviews and Other Evidence

DEVELOPMENT OF CLINICAL PRACTICE GUIDELINES

Assemble Guideline Development Group

Produce Clinical Practice Guideline

Incorporate Expert Opinion and Patient Preferences and Characteristics

Use Guidance to Make Better Informed Decisions

Improved health outcomes and quality of care

Click any text for more information.
Challenges

1. Inefficiency
2. Poor quality
3. Lack of capacity
4. Lack of investment in information technology
5. Inaccessibility
6. Obsolescence
The health evidence trade-off
Living guidelines: trustworthy and up to date

Current Model: Intermittently updated guidelines

- Define scope
- Develop SR
- Develop guideline
- Guideline approval
- Publication / Dissemination

Time

- Implementation
- One in five recommendations outdated
- Change in policy?
- New product in market?

Currency / reliability

Living Evidence: Continuously updated guidelines

- Define scope
- Develop SR
- Develop guideline
- Guideline approval
- Publication / Dissemination

Change in policy
New product in market

Currency / reliability

- Update search strategy & run search
- Update systematic review
- Update recommendation(s)
- Revise scope based on feedback, policy & practice
- Disseminate updated recommendations
- Disseminate updated recommendations

Current Model:
Intermittently updated guidelines

Living Evidence:
Continuously updated guidelines
A reliable, efficient and effective evidence system
Concept to reality

Policy Forum

Living Systematic Reviews: An Emerging Opportunity to Narrow the Evidence-Practice Gap

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1Department of Infectious Diseases, Alfred Hospital and Monash University, Melbourne, Australia; 2School of Public Health and Preventive Medicine, Monash University, Melbourne, Australia; 3World Vision Australia, Melbourne, Australia; 4National Trauma Research Institute, Alfred Hospital, Melbourne, Australia; 5-PPH-Centre, Institute of Education, University of London, London, England; 6School of Social and Community Medicine, University of Bristol, Bristol, England; 7Centre for Reviews and Dissemination, University of York, York, England; 8Informatics and Knowledge Management Department, The Cochrane Collaboration, Freiburg, Germany; 9Department of Surgery, Monash University, Melbourne, Australia

The Bridge from Evidence to Practice

Health research promises societal benefit by making better health possible. However, there has always been a gap between research findings (what is known) and health care practice (what is done), described as the “evidence-practice” or “know-do” gap [1]. The reasons for this gap are complex [2], but it is clear that synthesising the complex, incomplete, and at times conflicting findings of biomedical research into forms that can readily inform health decision making is an essential component of the bridge from “knowing” to “doing.”

Systematic reviews (SRs) and meta-analyses have provided inestimable benefit for human health by contributing to the

Summary

• The current difficulties in keeping systematic reviews up to date leads to considerable inaccuracy, hampering the translation of knowledge into action.
• Incremental advances in conventional review updating are unlikely to lead to substantial improvements in review currency. A new approach is needed.
• We propose living systematic review as a contribution to evidence synthesis that combines currency with rigour to enhance the accuracy and utility of health evidence.
• Living systematic reviews are high quality, up-to-date online summaries of health research, updated as new research becomes available, and enabled by improved production efficiency and adherence to the norms of scholarly communication.
• Together with innovations in primary research reporting and the creation and use of evidence in health systems, living systematic review contributes to an emerging evidence ecosystem.
Australian Living Evidence Consortium

AUSTRALIAN LIVING EVIDENCE CONSORTIUM
Living national guidelines

Living Stroke Clinical Guidelines
National COVID-19 Clinical Evidence Taskforce

• A trusted, unified, national clinical voice providing guidance and reassurance to Australian clinicians

• Combining
  • Collaboration of major peak national clinical groups
  • Rigorous, evidence-based processes
  • Up to date with the latest research

• Scope
  • Clinical care
  • People with suspected or confirmed COVID-19
Partners & Funders

Partners

MONASH University
MONASH Public Health and Preventive Medicine
hereco
CHF Consumer Health Forum of Australia
NPS MedicineWise
covidence
Mapp
AUSTRALIAN COMMISSION ON SAFETY AND QUALITY IN HEALTH CARE

Funders

Australian Government
VICTORIA State Government
The Ian Potter Foundation
Equity Trustees
Lord Mayers Memorial Foundation
### Remdesivir vs Placebo

#### People with COVID-19

<table>
<thead>
<tr>
<th>Outcome (Timeframe)</th>
<th>Study results and measurements</th>
<th>Absolute effect estimates</th>
<th>Certainty of the Evidence (Quality of evidence)</th>
<th>Plain text summary</th>
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</thead>
<tbody>
<tr>
<td><strong>All-cause mortality (Day 14)</strong> During treatment (14 days)</td>
<td>Relative risk 0.71 (CI 0.95 0.39 - 1.28) Based on data from 1296 patients in 2 studies</td>
<td><strong>Placebo</strong>: 102 per 1000 <strong>Remdesivir</strong>: 72 per 1000 Difference: 30 fewer per 1000 (CI 95% 62 fewer - 29 more)</td>
<td>Low Due to serious imprecision and inconsistency</td>
<td>Remdesivir may decrease all-cause mortality slightly (day 14; total no of events = 108) Uncertainty</td>
</tr>
<tr>
<td><strong>All-cause mortality (Day 28)</strong> During treatment (28 days)</td>
<td>Relative risk 1.09 (CI 0.95 0.54 - 2.18) Based on data from 236 patients in 1 study</td>
<td><strong>Placebo</strong>: 128 per 1000 <strong>Remdesivir</strong>: 140 per 1000 Difference: 12 more per 1000 (CI 95% 59 fewer - 151 more)</td>
<td>Low Due to very serious imprecision</td>
<td>We are uncertain whether remdesivir increases or decreases all-cause mortality (day 28; total no of events = 32) Uncertainty</td>
</tr>
<tr>
<td><strong>Respiratory failure or ARDS</strong> During treatment (28 days)</td>
<td>Relative risk 0.84 (CI 0.95 0.47 - 1.53) Based on data from 1296 patients in 2 studies</td>
<td><strong>Placebo</strong>: 117 per 1000 <strong>Remdesivir</strong>: 98 per 1000 Difference: 19 fewer per 1000 (CI 95% 52 fewer - 62 more)</td>
<td>Low Due to serious imprecision and inconsistency</td>
<td>We are uncertain whether remdesivir increases or decreases respiratory failure or ARDS (total no of events = 130) Uncertainty</td>
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</tbody>
</table>
5.3 Remdesivir

**Conditional recommendation**

Whenever possible remdesivir should be administered in the context of a randomised trial with appropriate ethical approval. Use of remdesivir for adults with moderate, severe or critical COVID-19 outside of a trial setting may be considered.

For information on dosages, length of treatment and characteristics of the patients in the trials used for this recommendation, see the Practical info tab below.

The Taskforce is continually monitoring research on antiviral and other disease-modifying treatments. As of 3 June 2020 we identified two randomised trials of remdesivir versus placebo (1286 participants) and one randomised trial that compared a 10-day course to a 5-day course of remdesivir (957 participants).

As evidence accumulates regarding the use of remdesivir in the treatment of COVID-19, the Taskforce will continue to review and update this recommendation, including in special populations (e.g. children, pregnant women, people with immunosuppression or chronic disease).
## Progress to date

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<tr>
<th>Living Guideline</th>
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<td>• Assessment for suspected COVID-19</td>
<td>• Corticosteroids</td>
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<td>• Monitoring and markers of clinical deterioration</td>
<td>• Management of mild COVID-19</td>
<td>• Chemoprophylaxis</td>
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<tr>
<td>• Antivirals and other disease-modifying treatments</td>
<td>• Management of patients with moderate to severe COVID-19</td>
<td>• Cardiac arrest</td>
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<td>• Respiratory support</td>
<td>• Management of patients with severe to critical COVID-19</td>
<td>• Timing of mechanical ventilation</td>
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<td>• Steroids for people with asthma or COPD and COVID-19</td>
<td>• Respiratory support for patients with severe to critical COVID-19</td>
<td>• Stroke protocols</td>
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<td>• Anticoagulants</td>
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<td>• GP triage</td>
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<td>• ACE-I/ARBs in patients with COVID-19</td>
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<td>• Nitric oxide</td>
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<td>• Rehabilitation and post-discharge follow-up</td>
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<td>• Retrieval (specifically in rural, remote regions)</td>
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<td>• Pa02</td>
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<td>• Pregnancy &amp; perinatal questions</td>
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<td>• Children &amp; adolescents questions</td>
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<td></td>
<td>• Palliative &amp; aged care questions</td>
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Publication and dissemination

Caring for people with COVID-19
Supporting Australia's healthcare professionals with continually updated, evidence-based clinical guidelines

11/06/20: Weekly Communiqué from the National Steering Committee »

LATEST GUIDANCE
11 JUNE 2020
Updates for the Taskforce this week cover:
- Definitions of disease severity for children
- Updated evidence for remdesivir
- Tracheostomy

Follow us on twitter for the latest updates

https://covid19evidence.net.au/

LIVING GUIDELINES
High-priority, evidence-based clinical COVID-19 guidelines updated weekly with the latest research

We have developed recommendations that cover:
- Definition of disease severity
- For adults
- For children
- Monitoring and markers of clinical deterioration
- Antivirals and other disease-modifying treatments
  - Hydroxychloroquine
  - Lopinavir/ritonavir
  - Remdesivir
- Other disease-modifying treatments (incl. tocilizumab and convalescent plasma)
- Respiratory support
- High-flow nasal oxygen therapy
Responsive to needs of clinicians

WHAT FURTHER GUIDANCE IS NEEDED?

Your views help us to identify and prioritise questions to include in the living guideline.

To check if your topic area or question is already being considered by our team please review this list.

PERSONAL DETAILS

Name *

First

Last

Email *

Please enter your email, so we can follow up with you.

What is your clinical specialty or area? *

SUGGESTIONS

Suggest a new topic or clinical question. Please note that our living guideline aims to
Progress to date

- Guidelines launched 4 April (two weeks after Taskforce established)
- Weekly updates since
- 29 national clinical member organisations
- 9 standing expert panel and leadership group meetings each week
- 35 recommendations published
- 5 clinical flowcharts (assessment, mild, moderate-severe and severe-critical COVID-19)
- Over 3,000 citations screened
- 168 people contributing
- 115,000 website sessions (16% international)
- Over 6,000 flowchart downloads
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