Extensive collaboration to mobilise rapid evidence-informed decision-making for the National treatment guidelines for COVID-19 in South Africa



'Coming together is a beginning. Keeping together is progress. Working together is success,' Henry Ford.

The **World Health Organization** defines <u>knowledge translation</u> as the 'the exchange, synthesis, and effective communication of reliable and relevant research results. The focus is on promoting interaction among the producers and users of research, removing the barriers to research use, and tailoring information to different target audiences so that effective interventions are used more widely'.

The **COVID-19 pandemic** highlighted the critical need for expedient access to high-quality evidence to inform clinical management and medicine procurement decisions in **South Africa** (SA). Through extensive collaboration between the South African National Department of Health (NDOH), National Essential Medicines List Ministerial Advisory Committee (NEML-MAC) on COVID-19 Therapeutics, and SA GRADE Network, co-led by Cochrane SA and the Centre for Evidence-Based Health (Stellenbosch University), we produced rapid evidence reviews that informed National Guidelines for COVID-19 management. This <u>South African COVID-19 response</u> (relating to guideline development) is typical of a complex system, described in Figure 1.



Figure 1: Emergence of the South African COVID-19 response (relating to guideline development for COVID-19 therapeutics – a complex adaptive system system)

Source: Adaptation from Monostori et al., Complex Adaptive Systems (CAS) Approach to Production Systems and Organisations. The 41st CIRP Conference on Manufacturing Systems, 2008

A <u>complex adaptive system</u> describes heterogeneous agents interacting dynamically within a particular context, adapting to each other's actions and, in response to the environment, self-organizing to maintain equilibrium. Repetitive interactions produce emergent properties, are non-linear and can adapt.

The **collaboration** between evidence providers and service users, incorporating timely evidence-informed decisionmaking processes for COVID-19 therapeutics in SA describes the knowledge translation efforts to close the research-topolicy gap. The <u>World Health Organization's Evidence-Informed Policy Network (EVIPNet</u>) classifies **knowledge translation** initiatives as various models, which includes 1) user-pull and 2) exchange efforts, that generally describe the way evidence was applied or used during the COVID-19 response for the development of therapeutic guidelines.



Source: Adaptation from <u>Lavis</u> et al., Assessing country-level efforts to link research to action. Bull World Health Organ, 2006, and <u>WHO guide for evidence-informed decision-making</u>, 2021.

Figure 2 graphically describes the knowledge translation models that include '**User-pull efforts'** as the provision of supportive structures and tools for decision-makers, enabling policy-makers to request evidence from researchers. These could be either online repositories of high-quality, policy-relevant evidence syntheses reports or systematic reviews, or rapid response units that could be a vehicle to meet policy-makers' research needs.

'Exchange efforts' is an initiative where partnerships are developed between researchers and policy-makers to collaborate on research projects, mutually developing the research question and contextualising research evidence and real-world experiences. Structured discussions take place between decision-makers, policy-makers, researchers and other stakeholders to deliberate on policy dialogues.

An **inter-organisational collaboration utilised a structured, yet flexible approach**, was implemented, adapted for local needs. The NEMLC-MAC prioritised review questions and teams conducted rapid reviews, based on Cochrane's rapid review <u>methodology</u>, (searching, appraising, and summarising evidence), informing NEML-MAC recommendations (using the GRADE Evidence-to-Decision Framework). Recommendations, shared with the NDOH, were then translated into COVID-19 policy and funding decisions, and published.

An overview of the **rapid review process** is provided in figure 3.

Evolving Rapid Review Methods



PICO to publication \approx 7 to 21 days (iterative review process between review team and committee)

Figure 3: Methodology for the South African COVID-19 therapeutic rapid reviews

Effective collaborative partnership resulted in the production of 69 rapid review reports (including updates reflecting emerging evidence) and recommendations for 33 therapeutics. We developed methods for credible, transparent reporting which continue to evolve. We also minimised duplication by **partnering with other global evidence producers** (like <u>Cochrane France</u>), adding contextual evidence for local decisions. Final NEMLC-MAC recommendations were then presented to the overall NDOH COVID-19 response team to guide policy, guidelines, and procurement. For transparency purposes, the reports and recommendations were **published on the** <u>NDOH website</u>.

Furthermore, to aid dissemination of key messages from research findings to intended audiences, the **researchers developed user-friendly formats to package the evidence** using graphics and common language for effective communication. The draft infographics were reviewed and ratified by NEMLC-MAC and published on the <u>NDoH website</u>.



In this initiative, **inter-organisational collaboration** was formed between a team of skilled **evidence producers and evidence users**, working flexibly with tight timelines and continuously evolving evidence. This made rapid evidenceinformed decisions possible by using an adaptable team approach, with iterative real-time local and global collaboration to produce rapid evidence reviews.

To ensure sustainability, **continuous communication and collaboration are key** to expedite uptake of evidence-informed recommendations (requiring adequate resource investment and effective knowledge translation for end-user consumption), and to strengthen emergency health crisis preparedness.

In summary, EIDM is instrumental for successful knowledge translation, which together with effective strategies, adequate human resources and sufficient funding can bridge the evidence-to-policy and policy-to-implementation gaps. An important lesson learnt was that **collaborative relationships built on mutual trust and respect between research producers and users** can produce timely evidence products to inform policy decisions or assist with uptake of 'new knowledge' in practice.

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