Theme 1: Going beyond Health: Building Partnerships and Strengthening Collaboration for Health in All Policies

Stakeholder Insights and Guideline Review to Inform Antimicrobial Management Guidelines for Respiratory Infections in Primary Care: *A Qualitative Study in Singapore*

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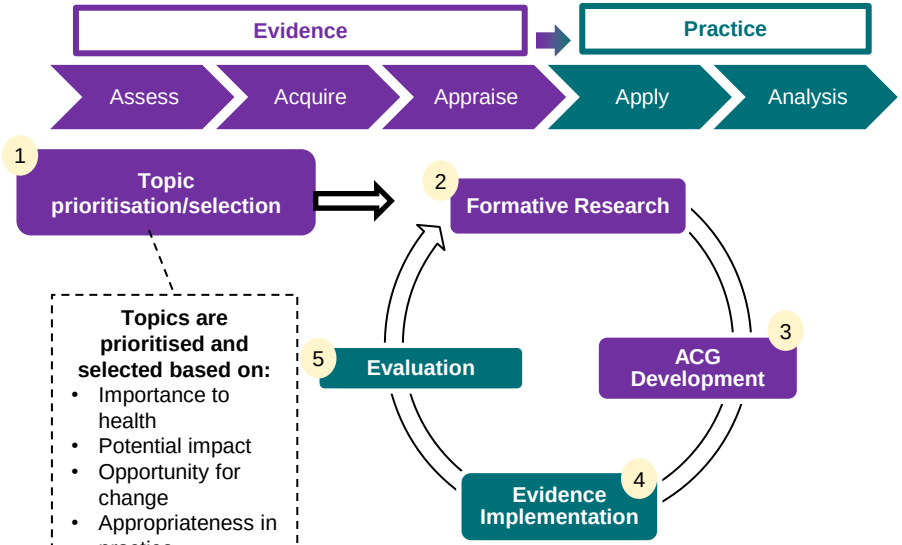
agency for care effectiveness

Who are we?

- The Agency for Care Effectiveness (ACE) was established by the Ministry of Health Singapore as the ***national*** health technology assessment and ***clinical guidance agency*** in Singapore

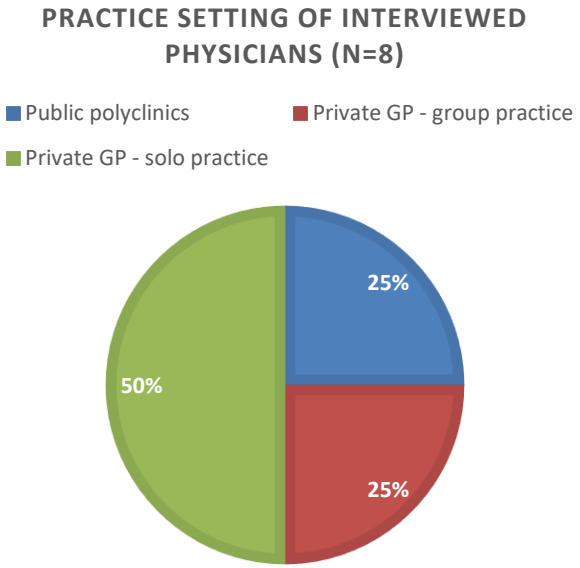
- The Evidence-to-Practice Office (ETPO) develops and publishes clinical guidelines that provide ***concise***, ***evidence-based recommendations*** to inform ***specific areas of clinical practice***



Engaging Stakeholders to Understand Ground Practices and Barriers to Antimicrobial Stewardship

- To understand local prescribing practices and reasons for inappropriate antimicrobial use, we **conducted 8 in-depth interviews with Primary Care physicians** – comprising private and public sector family physicians.

- Topics explored included: Upper respiratory tract infections (URTI) and Community-acquired pneumonia (CAP)



Insights from qualitative interviews with primary care physicians

Barriers to appropriate antimicrobial initiation in patients with URTI

Barriers in URTI

Diagnostic uncertainties
- Overlapping symptoms between viral and bacterial URTIs (e.g., runny nose, sore throat)
- Limited access to rapid diagnostic tools due to cost and availability in clinics
- Heavy reliance on clinical judgement (perceived as a challenge for more junior physicians)

Professional and clinical concerns
- Fear of missing bacterial infections and potential complications
- Fear of impaired reputation

Patient expectations and communication challenges
- Patient expectations, especially when patients are resistant to antimicrobial counseling
- Concerns about patient dissatisfaction
- Limited time for comprehensive patient education and addressing concerns

Financial considerations
- Prioritisation of profits through increased revenue from antibiotic prescriptions

Formulary restrictions
- Unavailability of antivirals in polyclinics

Professional isolation and outdated practices
- Professional isolation among certain subgroups of physicians with limited peer engagement and CME participation, leading to outdated prescribing habits

Reliance on clinical judgement was also brought up as a barrier for CAP due to limited access to diagnostic tools (Chest X-Rays) for some private family physicians.

A similar theme was brought up for CAP management as physicians shared - fear of negative patient outcomes and perception of parental expectations of antibiotics (may demand for/ refuse it) as some of their challenges

A system/resource limitation for CAP is the lack of antibiotic guidelines – Last antibiotic guidance was published at least 2 decades ago

From Stakeholder Insight → Clinical Question → Reference Guideline Extraction

A total of 18 clinical questions were developed - **Three** were derived from the interviews.

- Areas in scope that were changed – Diagnosis, monitoring and follow up

GP 1 from PCN –

"Yeah, point of care microbial testing **[rapid antigen test (RATs)]** is something that I widely use. During the pandemic, we test for COVID, and then now after pandemic, we include influenza as well... we are bringing in… the combined test kits, such as the SARS and influenza test kit, SARS-CoV-2 and influenza test kits. I do have the single-use, that is the non-combined ones also. So it depends. Sometimes when the patients have done their own RATs for COVID, then I will offer influenza if the picture looks like an influenza viral infection."

GP 2 from PCN –

" So a lot of them are influenza, COVID, mycoplasma. So I think a lot of them are actually even unnecessary antibiotics. We have to (have POCT (**RATs)**). We have to swab them... So we do the usual COVID swab, influenza, mycoplasma."

Questions that arose –

- What do we include under point-of-care testing in the guideline recommendation?
- When should one use a RAT?
- When to use a single vs multi-pathogen test kit?
- How can viral and bacterial URTI be differentiated?
- What is the role of RATs in differentiating viral and bacterial URTI?

From Stakeholder Insight → Clinical Question → Reference Guideline Extraction

Clinical Question –

- ✓ How can viral and bacterial URTI be differentiated?
  - What is the role of rapid antigen tests (RAT) in differentiating viral and bacterial URTI?

Selected guidelines	NG84, 2018[1]	NG237, 2023[2]	NG79, 2017[3]	NG120, 2019[4]	GCPG, 2021[5]
RAT (GAS, Influenza, RSV, COVID-19)	--	X	--	--	✓
PCR	--	--	--	--	--
Bloods (e.g., WCC, CRP)	--	--	--	--	--

Table 1: Position of DAT across reference guidelines. GAS: Group A Streptococcus; RSV: Respiratory Syncytial Virus; PCR: Polymerase Chain reaction; WCC: White Cell Count; CRP: C-Reactive Protein

Stakeholder insights on the use of RATs after the pandemic **highlighted an emerging role** for these tools in respiratory infection diagnosis and management – yet only 1 out of 5 recent high-quality reference guidelines addressed their use.

This is a potential gap that could indicate the need to curb low-value practice (i.e. a strong negative recommendations)

[1] NICE. Sore throat (acute): antimicrobial prescribing (NG84). 2018
[2] NICE. Suspected acute respiratory infection in over 16s: assessment at first presentation and initial management (NG237). 2023
[3] NICE. Sinusitis (acute): antimicrobial prescribing (NG79). 2017
[4] NICE. Cough (acute): antimicrobial prescribing (NG120). 2019
[5] Krüger K, Töpfner N, Berner R, Windfuhr J, Oltrogge JH. Clinical Practice Guideline: Sore Throat. Dtsch Arztebl Int. 2021;118(11):188-94.

Conclusion

- Interviews with practitioners revealed current ground practices and potential gaps.

- Findings shaped the **scope of the guidelines** and formulate **clinical questions** for reviewing recommendations by international reference guidelines.

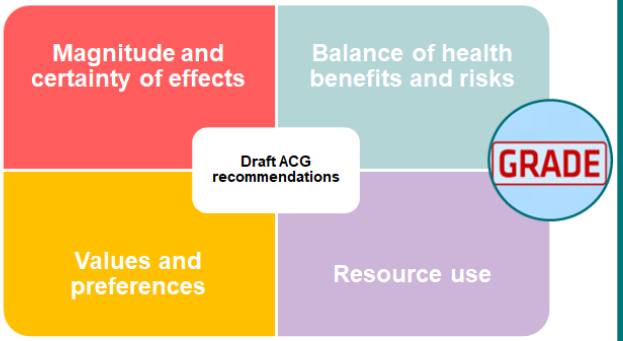
Next steps

Continue engaging ground clinicians, policymakers and stewardship in guideline development and implementation

- Define ACG scope and develop clinical questions
- Systematic identification of evidence
- Evidence mapping, appraisal, ACE SR(s)
- Drafting of recommendations
- Expert Group input
- Recommendations finalised and ACG drafted
- Internal/external review process
- Publication of ACG
- Implementation work

Triangulate gaps and barriers identified with domain experts and published evidence

A recommendation is not directly lifted from other guidelines or research papers:



Thank you!
Any questions?

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