

COVID-19 & Rheumatology

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Disclosures

- Personal Disclosures
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Learning Objectives

- What are the important risk factors for patients with rheumatic disease?
- How should you manage rheumatology medications around COVID-19 vaccination
- What happens if people with rheumatic disease get COVID?
- What is pre-exposure prophylaxis and who should get it?
- Long Covid – what even is it?

General Risk Factors Overwhelm Other Risks

- Age 40-49
- Age 50-59
- Age 60-69
- Age 70-79
- Age 80+
- Obesity (BMI 35-40)
- Diabetes
- Rheumatoid, lupus, psoriasis

Death HR 0.30 (0.25-0.36)

Death HR Referent

Death HR 2.40 (2.2-2.7)

Death HR 6.07 (5.5-6.7)

Death HR 20.6 (18.7-22.7)

Death HR 1.40 (1.3-1.5)

Death HR 1.95 (1.8-2.1)

Death HR 1.30 (1.22-1.27)

Risk of COVID-19 and severe COVID-19 in RA

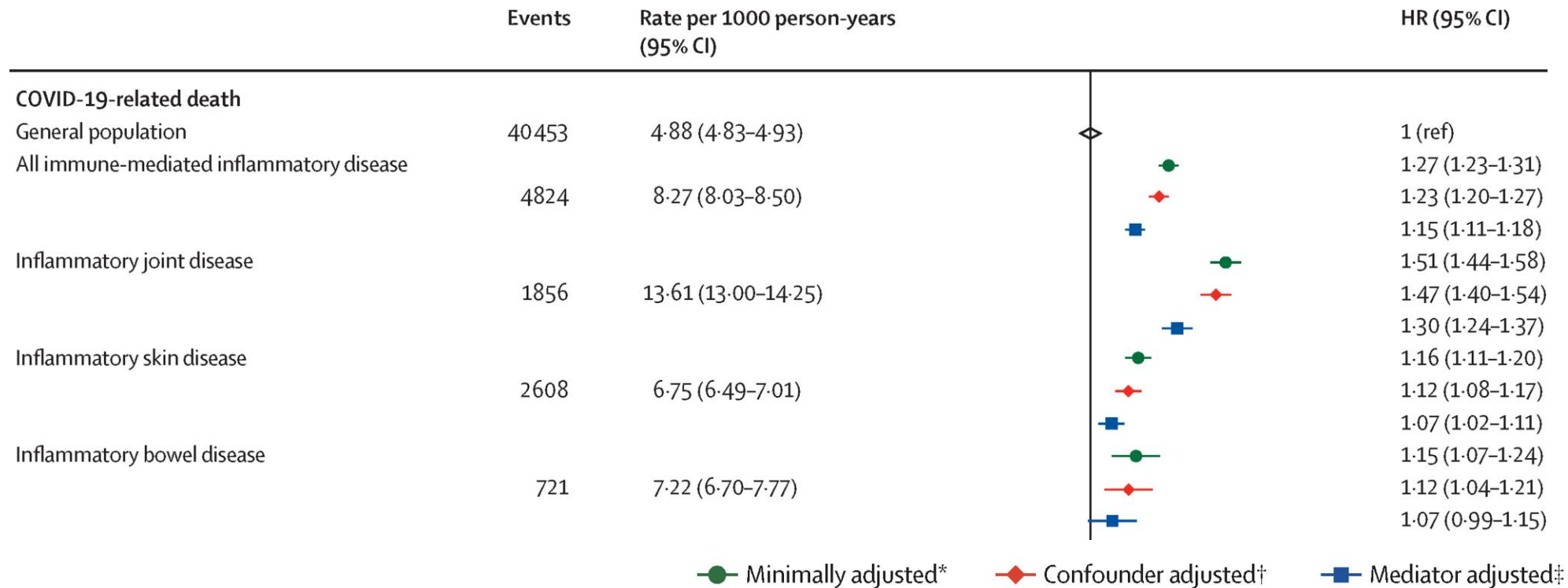
VA Hospital System: 33,886 RA & 33,886 non-RA, 85% male, mean age 68
1,503 COVID-19 diagnoses, 388 severe COVID-19 cases, and 228 non-COVID-19 related deaths

	Unadjusted HR	Adjusted HR*
All COVID-19		
Non-RA	1 (Ref)	1 (Ref)
RA	1.34 (1.21 - 1.48)	1.25 (1.13 - 1.39)
COVID-19 Hospitalisation or death		
Non-RA	1 (Ref)	1 (Ref)
RA	1.55 (1.26 - 1.90)	1.35 (1.10 - 1.66)

RA and non-RA matched on age, sex and VA site

*Adjusted for race, ethnicity, smoking, co-morbidity score, insurance status, urban/rural residence, no. of hospitalisations in prior year, service connected condition, county level-COVID-19 incidence rates

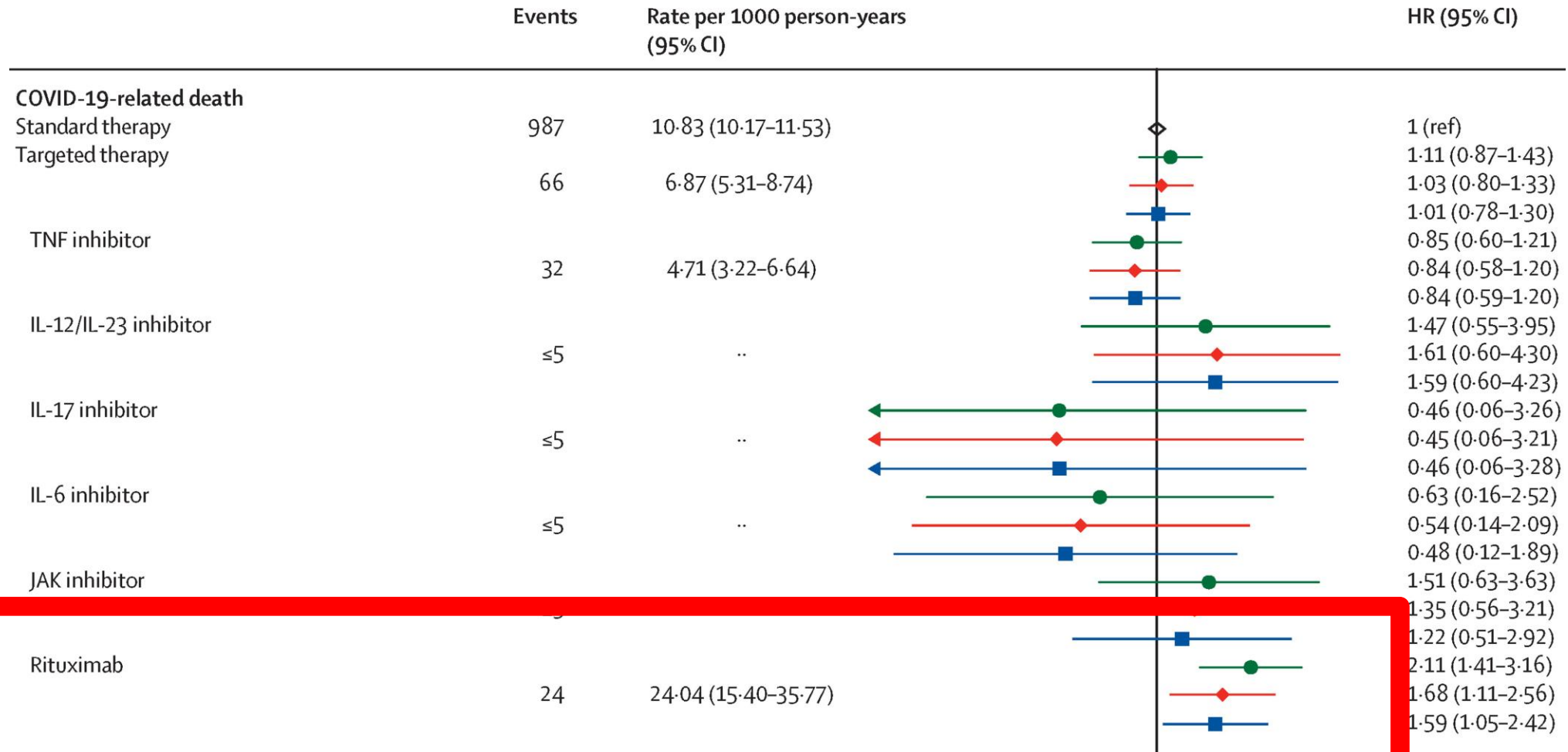
Population Wide Risk Comparisons



1.2M people with immune mediate disease; 16.5M people as controls

UK general practice data with linked hospital records from March 1 to Sept 30, 2020

COVID-19 death & rheumatic drugs



● Minimally adjusted* ◆ Confounder adjusted† ■ Mediator adjusted‡

Summary 1

- What are the important risk factors for patients with rheumatic disease?
- It is the general population risk factors:
 - Advancing age
 - Obesity
 - Co-morbidity
- Plus:
 - Rituximab & Cyclophosphamide
 - Steroids

How do we managed
vaccines and DMARDs?

Medication	Timing Considerations for Immunomodulatory Therapy and Vaccination (applies to both primary vaccination and supplemental [booster] dosing)	Level of Task Force Consensus
Abatacept IV	Time vaccination so that it occurs one week prior to the next dose of IV abatacept	Moderate
Abatacept SQ	Hold for one to two weeks (as disease activity allows) after each COVID vaccine dose	Moderate
Acetaminophen, NSAIDs	Assuming that disease is stable, hold for 24 hours prior to vaccination. No restrictions on use post vaccination once symptoms develop.	Moderate
Belimumab SQ	Hold for one to two weeks (as disease activity allows) after each COVID vaccine dose	Moderate
TNFi, IL-6R, IL-1R, IL-17, IL12/23, IL-23, and other cytokine inhibitors[†]	The Task Force failed to reach consensus on whether or not to temporarily interrupt these following each COVID vaccine dose, including both primary vaccination and supplemental (booster) dosing	Moderate
Cyclophosphamide IV	Time CYC administration so that it will occur approximately 1 week after each vaccine dose, when feasible	Moderate
Hydroxychloroquine, IVIG	No modifications to either immunomodulatory therapy or vaccination timing	Strong (HCQ), Moderate (IVIG)
Rituximab or other anti-CD20 B-cell depleting agents	Discuss the optimal timing of dosing and vaccination with the rheumatology provider before proceeding [‡]	Moderate
All other conventional and targeted immunomodulatory or immunosuppressive medications (e.g., JAKi, MMF) except those listed above [§]	Hold for one to two weeks (as disease activity allows) after each COVID vaccine dose	Moderate

Note: individual medications that were specifically voted on by the task force are listed on separate rows and were not collapsed, even if the resulting recommendation was similar to others.

Summary 2

- Holding MTX or other treatments will **always** be a decision that depends on the individual patient
- In the right circumstances medication can be withheld for up to two weeks post COVID-19 vaccination
- Which medications, MTX, maybe others?

What is pre-exposure
prophylaxis and when should
we use it?

Pre-exposure prophylaxis

- Pre-COVID-19 infection
- Monoclonal antibody therapy given in high-risk patients to reduce the consequences of COVID-19 **if they contract it**

Tixagevimab/cilgavimab for COVID-19

5,197 adults at increased risk of poor vaccine response, >60, obesity, CKD, COPD, immunosuppressants OR location risk like healthcare workers, dormitory living

Mean age 54; F:M. 46:54

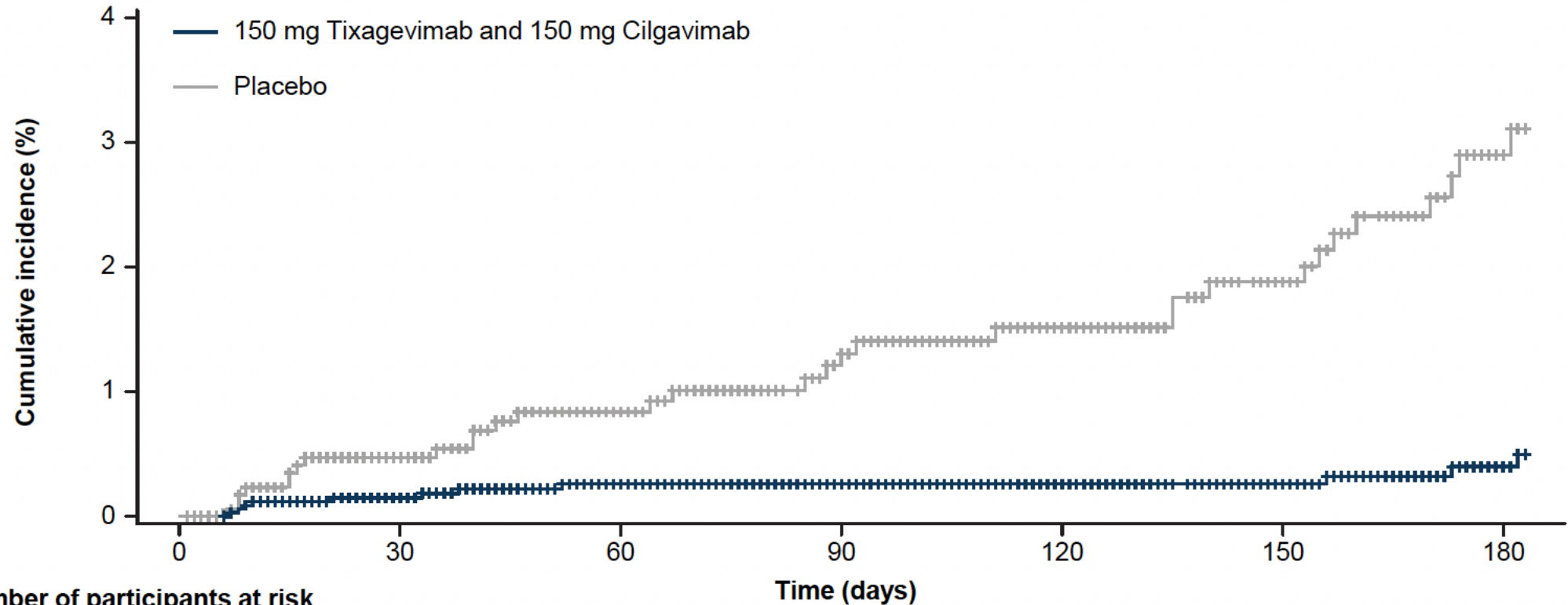
The most common risk factors were obesity (42%), age \geq 65 years (24%), and hypertension (36%)

Randomised 2:1 to 300mg Active (n=3460) or placebo (n=1737), followed to Day 547

PRIMARY OUTCOME: COVID-19 infection by RT-PCR

	Active	Placebo	Difference	NNT	P value
COVID-19	8 (0.2%)	17 (1.0%)	-0.8%	125	$P < 0.001$
RRR	77 (52-89)				

Cumulative incidence of SARS-CoV-2 RT-PCR–positive symptomatic illness was lower for TIXA/CILGA vs. placebo^{2,a}



Number of participants at risk

	0	30	60	90	120	150	180
TIXA/CILGA	3441	2957	2393	2054	1815	1667	1044
Placebo	1731	1483	1177	991	856	774	472

Summary 3

- Pre-exposure prophylaxis can reduce the risk of poor outcomes
- The registration trial of tixagevimab/cilgavimab did not test these agents in the most high risk people, ie. rituximab patients
- Risks from therapy low, benefits potentially quite major
- Given in Metro North at North Lakes, referral process “easy”

Understand the
recommendations for **managing**
anti-rheumatic drugs when
patients get COVID-19

Your patient has COVID-19, now what?

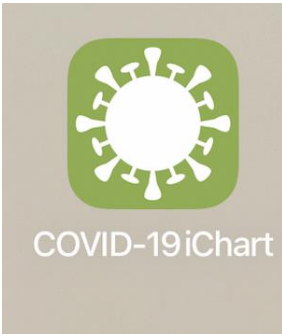
- With hold all anti-rheumatic therapy, except HCQ (ACR guidelines)
- Maintain steroids
- Make a risk assessment or refer to someone else to do this (eg. local hospital COVID-19 service)
- Prescribe or refer for COVID-19 anti-virals as appropriate

Risk Assessment

- Age
- Co-morbidity
- Anti-rheumatic therapy
- Vaccination status
- Previous infections
- Access to medical care

COVID-19 Anti-virals

- Molnupiravir (oral, streamlined authority)
- Nirmatrelvir & ritinovir (oral, streamlined authority)
 - ****drug interactions ++ => Get COVID-19 iChart on App Store or visit <https://www.covid19-druginteractions.org/>,**
- Sotrovimab (IV, Mab against SARS-CoV-2)
- Tixagevimab/cilgavimab (IM, Mab against SARS-CoV-2 as Rx)
- Variants are affecting susceptibility to monoclonals, the clinical significance of this is currently unknown, **data lags prevalent variants**



Summary 4

- Most important to actually consider general population risk factors instead of focusing on the rheumatic disease that the patient has.
- Consult with your local ID service/Covid-19 service

Understand the main symptoms
being attributed to **Long COVID**
and emerging trends in this area

Long COVID

- What is Long COVID?
- How common is it?

What are the major symptoms reported?

Data from 42,000 UK patients comparing 'No Covid' to 'COVID > 12 weeks prior'

- fatigue
- shortness of breath
- muscle pain or aches
- difficulty concentrating
- chest tightness

Risk Factors for Long COVID

- The unvaccinated
- More severe COVID-19 infection
- Older age
- Co-morbidities

Treatment of Long COVID-19

- CDC Guidance*:
 - Listen with compassion
 - Start a conversation to gain understanding
 - Determine how you can help with what they need
- Use our pre-pandemic knowledge
 - Exclude treatable causes of symptoms
 - Graded exercise for fatigue
 - Address anxiety or other mental health problems

- Begin rehabilitation during the acute illness as appropriate. **CBR** [Taskforce]
- Develop a management plan with the person, addressing their main symptoms, problems, or risk factors, and an action plan. **PP** [Taskforce]
- Consider individual factors and access issues in determining location for further treatment or rehabilitation e.g. home-based, telehealth or face-to-face options. **PP** [Taskforce]
- Consider using a chronic disease plan, mental health care plan or other enhanced care plan to facilitate access to multidisciplinary care. **CBR** [Taskforce]
- Use local and regional protocols and [HealthPathways](#) to determine optimal referral pathways. **PP** [Taskforce]
- Consider the implications and support required for returning to pre-injury work or education. **PP** [adapted NICE]
- Give people information on COVID-19 vaccines and encourage them to follow current official guidance for vaccination. Explain that it is not known if vaccines have any effect on ongoing symptomatic COVID-19 or post-COVID-19 condition. [adapted NICE]

Australia COVID-19
Evidence Taskforce

*<https://www.cdc.gov/coronavirus/2019-ncov/long-term-effects/care-post-covid.html>

Final Summary

- Age and co-morbidity big risks, so is rituximab
- Vaccination is recommended, included all available boosters and if appropriate withhold MTX 2/52 post
- Pre-exposure prophylaxis with tixagevimab/cilgavimab is recommended for high-risk patients (ie. rituximab patients)
- Help your patients get the help they need if they get COVID-19
- Advocate for them, and direct them to appropriate resources if they develop Long COVID-19