

Supplementary File 1: Key findings from downloaded COVID-19 information for those categorised as high-risk (20 April 2020)

Country	Resource Type	Source	Date last reviewed	COVID-19 Risk by Condition Description	Term to Describe Risk	WHO ERC relevance			NICE asthma guideline relevance	Other asthma self-management relevance	SMOG score*	F-K score**
						Trust	Communicating uncertainty	Messaging				
Global	Intergovernmental/Global	Global Asthma Network	Not stated	None	Not described	✓ Links to functioning accessible services	*	✓ Consistent messaging	None	None	12.3	15.5
Global	Intergovernmental/Global	Global Initiative for Asthma (GINA)	25/03/20	None	Not described	✓ Acknowledges uncertainty; links to functioning accessible services; longer than one week before	✓	✓ Consistent messaging; Messaging to promote health protection (COVID-19 specific)	Adherence; Asthma action plan; Speaking to a HCP	Inhaler use; Medications	12.9	14.2
Global	Intergovernmental/Global	UNICEF	Not stated	Pre-existing medical condition	More likely	✓ Acknowledges uncertainty; links to functioning accessible services;	✓	✓ Consistent messaging; Messaging to promote health protection (COVID-19 specific); Messaging risk (non-technical language)	None	Flu vaccine	10.6	11.9
Global	Intergovernmental/Global	United Nations	Not stated	Underlying medical problems; Pre-existing medical condition (e.g. lung disease)	More likely	✓ Acknowledges uncertainty; links to functioning accessible services	✓	✓ Consistent messaging; Messaging to promote health protection (COVID-19 specific)	None	None	8.6	10.3
Global	Intergovernmental/Global	World Allergy Organization (WAO)	24/03/20	Asthma	Higher risk	✓ Acknowledges uncertainty; longer than one week before	✓	✓ Messaging to promote health protection (COVID-19 specific)	Adherence; Asthma action plan; Speaking to a HCP	Managing breathing; Triggers; Medications; Inhaler use	8.9	11.4
Global	Intergovernmental/Global	World Health Organization (WHO)	08/04/20	Respiratory condition; Pre-existing medical conditions (e.g.	More vulnerable; More likely	✓ Acknowledges uncertainty; links to	✓	✓ Messaging to promote health protection	None	None	8.3	9.1

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						Trust	Communicating uncertainty	Messaging				
				asthma; lung disease); Underlying medical problems		functioning accessible services; longer than one week before		(COVID-19 specific; Mental health and wellbeing)				
Australia	Patient Support Organisation/Charity	Asthma Australia	09/04/20	Asthma	More likely, More at risk; High risk; Vulnerable	✓ Acknowledges uncertainty; links to functioning accessible services; longer than one week before	✓	✓ Consistent messaging; Messaging risk (non-technical language); Messaging to promote health protection (COVID-19 specific; General physical health; Mental health and wellbeing)	Adherence; Asthma action plan; Speaking to a HCP	Flu vaccine; Inhaler use; Medications; Monitoring; Triggers; Access to services	11.8	8.4
Australia	Private Health Information Services	Health Direct	04/20 (only month reported)	Chronic medical condition (e.g. lung condition)	More likely, More at risk; High risk; Vulnerable	✓ Links to functioning accessible services; longer than one week before	*	✓ Consistent messaging; Messaging to promote health protection (COVID-19 specific)	None	Medications	13.8	11.7
Australia	Government	Department of Health	14/04/20	Chronic lung disease (e.g. severe asthma)	Increased risk; More likely, More at risk	✓ Links to functioning accessible services; Within last week	✓	✓ Consistent messaging; Messaging to promote health protection (COVID-19 specific)	None	Medications	11.4	6.6
Australia	Private Health Information Services	NPS MedicinesWise	Not stated	Asthma	Other, "take precautions"	✓ Links to functioning accessible services	*	✓ Messaging to promote health protection (COVID-19 specific);	Adherence; Asthma action plan; Speaking to a HCP	Flu vaccine; Inhaler use	12.6	8.7

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						Trust	Communicating uncertainty	Messaging				
								General physical health)				
Canada	Patient Support Organisation/Charity	Canadian Network for Respiratory Care	Not stated	Respiratory conditions (e.g. asthma)	Great risk	✓ Links to functioning accessible services	✓	✓ Consistent messaging; Messaging to promote health protection (COVID-19 specific)	Adherence; Asthma action plan; Speaking to a HCP	Medications	9.4	9.8
Canada	Patient Support Organisation/Charity	Asthma Canada	07/04/20	Underlying health conditions (e.g. asthma)	Increased risk; More severe; Life threatening	✓ Links to functioning accessible services; longer than one week before	✗	✓ Consistent messaging; Messaging to promote health protection (COVID-19 specific; General physical health)	Adherence; Asthma action plan; Speaking to a HCP	Medications	10.5	11.7
Canada	Private Health Information Service	MedBroadcast	Not stated	Underlying chronic medical conditions (e.g. lung disease)	Higher risk	✓ Acknowledges uncertainty	✗	✗	None	None	7.8	8
Canada	Government	Public Health Agency of Canada	09/04/20	Serious respiratory disease (e.g. moderate to severe asthma); Underlying medical conditions (e.g. respiratory diseases)	High risk; Severe; More at risk	✓ Links to functioning accessible services; longer than one week before	✗	✓ Consistent messaging; Messaging to promote health protection (COVID-19 specific; General physical health)	None	Medications	10.9	12.1
Canada	Patient Support Organisation	Canadian Lung Association	23/03/20	People with lung disease	Most risk	✓ Links to functioning accessible services; longer than one week before	✗	✓ Consistent messaging; Messaging to promote health protection (COVID-19 specific)	None	Medications	10.6	12

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						Trust	Communicating uncertainty	Messaging				
New Zealand	Patient Support Organisation/Charity	Asthma Respiratory Foundation NZ	06/04/20	Respiratory conditions (e.g. asthma)	More likely, More at risk; High risk; Vulnerable	✓ Links to functioning accessible services; longer than one week before	✓	✓ Consistent messaging; Messaging to promote health protection (COVID-19 specific; General physical health; Mental health and wellbeing)	Adherence; Asthma action plan; Speaking to a HCP	Flu vaccine; Medications; Triggers	11.1	11.2
New Zealand	Patient Support Organisation/Charity	Asthma New Zealand	Not stated	Asthma	Not described	✗	✗	✓ Messaging to promote health protection (COVID-19 specific; General physical health)	Adherence; Asthma action plan; Speaking to a HCP	Flu vaccine; Inhaler use; Medications; Monitoring	6.8	4.7
New Zealand	Government	Ministry of Health	09/04/20	Serious respiratory disease (e.g. moderate to severe asthma)	High risk	✓ Links to functioning accessible services; longer than one week before	✓	✓ Consistent messaging; Messaging to promote health protection (COVID-19 specific)	None	Medications	15.8	13.5
New Zealand	Government	COVID-19 Government Website	14/04/20	Serious respiratory disease (e.g. moderate to severe asthma)	Increased risk; vulnerable	✓ Acknowledges uncertainty; Within last week	✗	✓ Consistent messaging; Messaging to promote health protection (COVID-19 specific)	None	Medications	11.2	10.9
New Zealand	Patient Support Organisation/Charity	Asthma and Respiratory Management BOP	Not stated	Respiratory condition	Other - "please take extra care of yourself"	✗	✗	✓ Messaging to promote health protection (General physical health)	Adherence; Speaking to a HCP	None	5.5	8.0

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						Trust	Communicating uncertainty	Messaging				
New Zealand	Patient Support Organisation/Charity	Nelson Asthma Society	Not stated	Not described	Not described	x	x	✓ Messaging to promote health protection (COVID-19 specific)	None	None	12.3	14.9
New Zealand	Patient Support Organisation/Charity	CanBreathe	Not stated	Not described	Not described	x	x	x	None	Access to services; Managing breathing	8.8	11.0
New Zealand	Patient Support Organisation/Charity	North Otago Asthma Society	Not stated	Refers to Asthma NZ site	Not described	✓ Links to functioning accessible services; longer than one week before	x	✓ Messaging to promote health protection (General physical health)	None	Managing breathing	Refers to Asthma NZ site	Refers to Asthma NZ site
New Zealand	Private Health Information Services	Health Navigator NZ	Not stated	Asthma	Not described	✓ Transparent	✓	✓ Messaging to promote health protection (General physical health)	Adherence; Asthma action plan; Speaking to a HCP	Inhaler use	8.7	9.3
United Kingdom	Patient Support Organisation/Charity	Allergy UK	26/03/20	Asthma	High risk; More at risk; No increased risk	✓ Acknowledges uncertainty; links to functioning accessible services; longer than one week before	✓	✓ Consistent messaging; Messaging to promote health protection (COVID-19 specific)	Adherence; Speaking to a HCP	Inhaler use; Medications	11.0	11.5
United Kingdom	Patient Support Organisation/Charity	Asthma UK	20/04/20	Asthma	High risk	✓ Acknowledges uncertainty; links to functioning accessible services; Within last week	✓	✓ Consistent messaging; Messaging to promote health protection (COVID-19 specific; General physical health;	Adherence; Asthma action plan; Speaking to a HCP	Inhaler use; Medications; Monitoring; Annual asthma review	7.3	8.8

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						Trust	Communicating uncertainty	Messaging				
								Mental health and wellbeing)				
United Kingdom	Patient Support Organisation/Charity	British Lung Foundation	20/04/20	Asthma	High risk; Vulnerable	✓ Acknowledges uncertainty; links to functioning accessible services; Within last week	*	✓ Consistent messaging; Messaging to promote health protection (COVID-19 specific; General physical health; Mental health and wellbeing)	Adherence; Asthma action plan; Speaking to a HCP	Inhaler use; Medications	8.1	8.6
United Kingdom	Public Health Organisation	HSC Public Health Agency	n/a	Underlying health condition	Not described	✓ Links to functioning accessible services	*	✓ Consistent messaging	None	None	9.3	9.8
United Kingdom	Public Health Organisation	NHS	17/04/20	Lung conditions (e.g. asthma)	High risk; Increased risk; Vulnerable	✓ Links to functioning accessible services; Within last week	*	✓ Consistent messaging; Messaging to promote health protection (COVID-19 specific; General physical health; Mental health and wellbeing)	Speaking to a HCP	Medications	8.3	12.4
United Kingdom	Public Health Organisation	NHS Direct Wales	20/04/20	Lung conditions (e.g. asthma)	Most at risk; Vulnerable	✓ Links to functioning accessible services; Within last week	*	✓ Consistent messaging; Messaging to promote health protection (COVID-19 specific; Mental health and wellbeing)	Adherence	Medications	10.1	9.7

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						Trust	Communicating uncertainty	Messaging				
United Kingdom	Public Health Organisation	NHS England	Not stated	Long-term condition (e.g. asthma)	High risk; Vulnerable	✓ Acknowledges uncertainty; links to functioning accessible services	✗	✓ Consistent messaging; Messaging to promote health protection (COVID-19 specific; General physical health; Mental health and wellbeing)	None	Medications; Access to services	9.9	11.3
United Kingdom	Public Health Organisation	NHS Inform	17/04/20	Long term respiratory conditions (e.g. asthma)	High risk; Increased risk; Vulnerable	✓ Links to functioning accessible services; Within last week	✗	✓ Consistent messaging; Messaging to promote health protection (COVID-19 specific; General physical health; Mental health and wellbeing)	None	Medications	11.07	13.8
United Kingdom	Government	NI Government	Not stated	Long term respiratory conditions (e.g. asthma)	High risk; Vulnerable	✓ Links to functioning accessible services	✗	✓ Consistent messaging; Messaging to promote health protection (COVID-19 specific; Mental health and wellbeing)	Adherence	Medications	12	11.2
United Kingdom	Private Health Information Services	Patient.info	20/04/20	Long term respiratory conditions (e.g. asthma); Lung disease	Increased risk; Vulnerable	✓ Links to functioning accessible services; Within last week	✗	✓ Consistent messaging; Messaging to promote health protection (COVID-19 specific)	Adherence	Access to services	8.9	9.6

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						Trust	Communicating uncertainty	Messaging				
United Kingdom	Government	Scottish Government	08/04/20	Respiratory Conditions (e.g. asthma)	High risk; More at risk;	✓ Links to functioning accessible services; longer than one week before	✗	✓ Consistent messaging; Messaging to promote health protection (COVID-19 specific; General physical health; Mental health and wellbeing)	Adherence; Speaking to a HCP	Access to services	9.9	11
United Kingdom	Government	UK Government	09/04/20	Long term respiratory conditions (e.g. asthma)	Increased risk; Vulnerable	✓ Links to functioning accessible services; longer than one week before	✗	✓ Consistent messaging; Messaging to promote health protection (COVID-19 specific)	None	None	9.6	12.4
United Kingdom	Government	Welsh Government	15/04/20	Long term respiratory conditions (e.g. asthma)	High risk; Most likely; Vulnerable	✓ Links to functioning accessible services; Within last week	✗	✓ Consistent messaging; Messaging to promote health protection (COVID-19 specific; General physical health; Mental health and wellbeing)	None	Medications	8.6	10.1
United States of America	Patient Support Organisation/Charity	Asthma & Allergy Network	19/04/20	Compromised immune systems; underlying respiratory conditions; asthma	Higher risk; At risk; Greater risk	✓ Acknowledges uncertainty; links to functioning accessible services; Within last week; Transparent	✓	✓ Consistent messaging; Messaging to promote health protection (COVID-19 specific; General physical health;	Adherence; Asthma action plan; Speaking to a HCP	Medications; Inhaler use; Triggers; Monitoring	9.0	9.1

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						Trust	Communicating uncertainty	Messaging				
								Mental health and wellbeing)				
United States of America	Patient Support Organisation/Charity	American Lung Association	07/04/20	Underlying health conditions e.g. asthma; Poorly controlled chronic condition	Higher risk; Increased risk	✓ Acknowledges uncertainty; links to functioning accessible services; longer than one week before; Transparent	✓	✓ Consistent messaging; Messaging to promote health protection (COVID-19 specific)	Adherence; Speaking to a HCP	Medications; Access to services	8.7	9.0
United States of America	Patient Support Organisation/Charity	Asthma and Allergy Foundation	16/04/20	Underlying conditions e.g. asthma	Highest risk; Higher risk; High-risk	✓ Acknowledges uncertainty; links to functioning accessible services; Within last week; Transparent	✓	✓ Consistent messaging; Messaging to promote health protection (COVID-19 specific)	Adherence; Asthma action plan; Speaking to a HCP	Flu vaccine; Triggers; Medications; Inhaler use	6.8	7.6
United States of America	Public Health Organisation	Centers for Disease Control and Prevention (CDC)	17/04/20	Underlying medical conditions, particularly if not well controlled, including moderate to severe asthma	Higher risk; High-risk	✓ Acknowledges uncertainty; links to functioning accessible services; Within last week; Transparent	✓	✓ Messaging risk (non-technical language); Messaging to promote health protection (COVID-19 specific; Mental health and wellbeing)	Adherence; Asthma action plan; Speaking to a HCP	Flu vaccine; Triggers; Medications; Inhaler use	10.5	10.6
United States of America	Public Health Organisation	Mayo Clinic	17/04/20	Chronic medical conditions (e.g. lung disease); <i>“Although CDC says greater risk, no data to substantiate that patients with allergies and asthma are at</i>	Greater risk; Increased risk; Higher risk	✓ Acknowledges uncertainty; links to functioning accessible services; Within last week	✓	✓ Consistent messaging; Messaging to promote health protection (COVID-19 specific; General physical health;	Adherence; Speaking to a HCP	Triggers	8.6	9.3

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						Trust	Communicating uncertainty	Messaging				
				<i>an increased risk</i>				Mental health and wellbeing)				
United States of America	Private Health Information Services	WebMD	17/04/20	Medical conditions e.g. moderate to severe asthma	Most likely; Higher risk	✓ Acknowledges uncertainty; links to functioning accessible services; Within last week	✓	✓ Consistent messaging; Messaging to promote health protection (COVID-19 specific)	Speaking to a HCP	None	7.7	7.5

*SMOG = Simple Measure of Gobbledygook grade formula (table depicts mean scores of all relevant webpages of that organisation)

**F-K = Flesch-Kincaid grade level formula (table depicts mean scores of all relevant webpages of that organisation)

CDC = Centers for Disease Control and Prevention

HCP = Health Care Professional

NICE = National Institute for Health and Care Excellence

UK = United Kingdom

WHO ERC = World Health Organization Guideline for Emergency Risk Communication