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Epidemic & Pandemic Risk Solutions

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www.munichre.com/epidemic-risk-solutions



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Executive Summary

Munich Re's dedicated team offers epidemic & pandemic risk protection

NOW is the time to proactively manage pandemic risk. The necessary tools are readily available.



International
team of
experts

Epidemiologists
Financial experts
Actuaries
Lawyers
Underwriters



Biggest
Reinsurer of
the World

Supports
Research &
Development

Munich Re

- ... is known for **innovation** and **proactive risk identification & management**
- ... set up a dedicated Epidemic/Pandemic Risk Solutions Team in 2017
- ... offered pandemic protection **well before COVID-19**

COVID-19

- ... caused **severe losses** despite scepticism if pandemics can still hurt the economy
- ... caused **bankruptcies of several insurers**, highlighting the severity of the risk
- ... led to **communicable disease exclusions** becoming common in insurance
- ... revealed the need for **objective third-party triggers** and **fast claims settlement**

Proposed coverage

- ... focuses on protecting business **Revenues** and **Extra Expenses** through
 - a) Base plan: **Extra Expense** coordinated by Unimutual
 - b) Customized plan: tailored additional coverage arranged with Munich Re



Epidemic & Pandemic Risk

01



Professor Edward Holmes' take on the connection between climate change and pandemic risk



Professor Edward Holmes

- Prime Minister's Prize for Science 2021
- Fellow, Australian Academy of Science
- Fellow, The Royal Society (UK)
- Leadership Fellow & Professor of Virology
National Health and Research Council
(NHMRC)
- Faculty of Medicine and Health
Member, Sydney Institute for Infectious
Diseases

Frequency & severity of emerging infectious diseases are increasing...
...hence, better risk management solutions are required in the future

Every year there are **5 new** emerging infectious diseases reported & the WHO publishes ~ **100** Disease Outbreak News¹⁾

Metabiota²⁾ predict the probability of another pandemic of the same or greater magnitude as COVID-19 to be **2.5%-3.2%** within the next year.

Airfinity's³⁾ latest risk modelling suggests that there is a **3.16%** chance that a pandemic as deadly as COVID-19 could occur within the next year.

UK National Risk Register 2023⁴⁾ highlights a **5-25%** likelihood of a pandemic over a 5 year period.

Major contributors to this phenomenon are

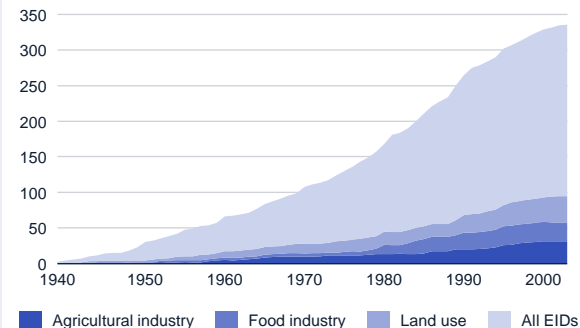


There have already been **3 significant coronavirus outbreaks** within 17 years

- **SARS** (2002/2003)
- **MERS** (2012/2015)
- **COVID-19** (2019 and on-going)

Increasing trend:
Emerging Infectious Diseases (EIDs)

Cumulative EID events



Pandemic is the most likely catastrophic event in the next five years. (Source: UK National Risk Register)

1) WHO standard reporting for outbreaks that could spread internationally or disrupt international travel or trade

2) Rebranded Ginkgo Bioworks in 2022 (Cheney, devex, 31 July 2021)

3) London-based disease forecasting company (Fortune, Apr 18, 2023 and Bloomberg, Apr 14, 2023)

4) UK Government National Risk Register 2023



The Unimutual Solution

**Parametric Pandemic/Epidemic
Protection**

02



Unimutual members voted for a base pandemic cover

Unimutual will make this available for the November renewal

Base Plan = \$100,000 limit for Extra Expense @ \$5,750 + taxes/charges

Post Conference **Survey**

Members were asked if they were interested in buying pandemic protection.

Most respondents supported making the **Base Plan** coverage accessible for the 2024/25 period.

- This would provide members with **rapid cash disbursements** to facilitate necessary actions should another outbreak occur.

Certain members sought a **Customised Plan** tailored to their business.

How to buy the **Base Plan**

Unimutual will provide a quote in the standard renewal pack.

Members who want to take up cover should **respond positively to Unimutual**.

No additional information is required.

How to buy a **Customised Plan**

Members who have purchased the base plan can convert this into a customised plan, including:

- Revenue loss
- Higher limits
- Excess attachment
- International exposures
- Business Continuity and Crisis Management Assistance

Contact: **Salinda Saat** (Unimutual)

MunichRe/Unimutual Base Pandemic Plan

Trigger structure and claims payment process

Epidemic/Pandemic Triggers

Parametric triggers



All triggers must be met

When Trigger 1

World Health Organisation (WHO) reports a new outbreak (DON)

What Trigger 2

WHO declares a Public Health Emergency of International Concern (PHEIC)

Where Trigger 3

Civil Authority Restriction issued in relation to the disease in Australia

Economic Trigger

Indemnity trigger



Responding to the outbreak

Extra Expenses incurred to operate in a safe and secure way despite the pandemic circumstances.



Claims Payment Process

Payout to the insured



Insurance Policy Payment

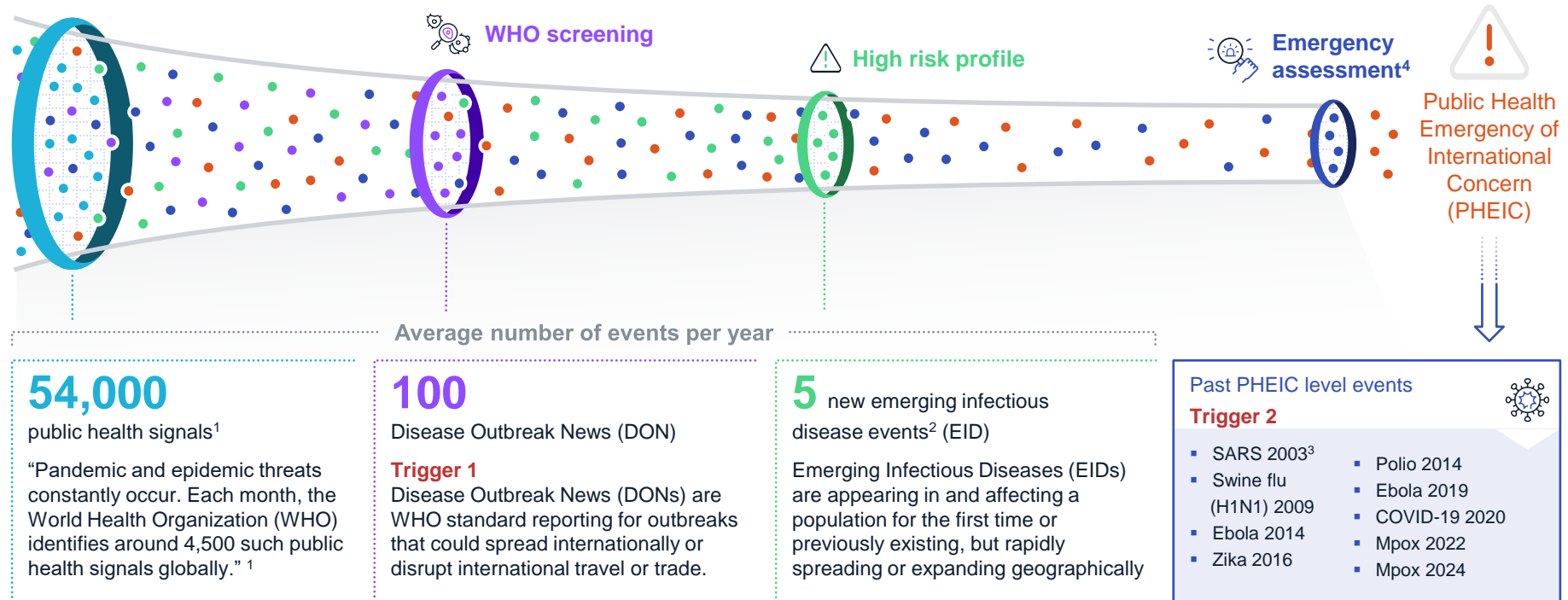
- Quick claims settlement process
- 1 page proof of loss form

A\$100,000 limit released within 30 days of a loss form to pay for a wide range of additional outbreak related expenses

There is a constant threat from emerging infectious diseases

WHO receives health signals, notifies severe outbreaks and issues emergency declarations

These are used as epidemic triggers for the ERS policy



¹ How better pandemic and epidemic intelligence will prepare the world for future threats | Nature Medicine 100 Disease Outbreak news: WHODONretrospectiveanalysis (1).pdf

² 201104_IPBES_Workshop_on_Diversity_and_Pandemics_Executive_Summary_Digital_Version.pdf

³ Triggered development of PHEIC instrument

⁴ International Health Regulations Emergency Committees (who.int). Emergency Committee provides its views on whether an event constitutes a PHEIC.

Governments' use of non-pharmaceutical interventions (NPIs)

[...] the **application of combinations of NPIs will be important in future pandemics**, particularly at early stages with novel pathogens when therapeutics and vaccines are not yet available.¹⁾

Will restrictions be used again?

Won't vaccines already be available?

Will restrictions be different?

¹⁾ The Royal Society (2023)

Governments' use of non-pharmaceutical interventions (NPIs)

[...] the **application of combinations of NPIs will be important in future pandemics**, particularly at early stages with novel pathogens when therapeutics and vaccines are not yet available.¹⁾

Will restrictions be used again?

- **Evidence to date** signals the **effectiveness of many NPIs**, especially when implemented in combinations.¹⁾
- Countries that had **strict early application** of combinations of NPIs, experienced a more controlled initial wave.¹⁾
- **Social distancing and 'lockdowns' were the most effective** of all the NPIs during COVID-19.¹⁾ These more stringent mandatory NPIs meet our definition of civil authority restriction required to trigger a pay-out.

Won't vaccines already be available?

- The relative **importance of NPIs** decreases with drug/vaccine availability and **increasing immunity** from vaccination and infection.²⁾
- However, **6-7 months is the most optimistic future scenario**, which comprises of an ambitious "100 days mission"³⁾ for vaccine and therapeutic development, plus a second 100 days for procurement and vaccine roll out.⁴⁾
- Until vaccines and therapeutics are readily available, **NPIs will still be required**.

Will restrictions be different?

- **Research is ongoing** as to how NPIs work in different **contexts, combinations and durations**, to ensure the burden of their application does not outweigh the benefits.
- WHO pandemic guidance for national authorities states "**Be ready to apply stringent PHSM** (i.e. NPIs), but for a limited time period in order to minimize associated unintended health, livelihood and other socio-economic consequences".⁵⁾

During the **initial pandemic phase, NPIs are the only option for pandemic control**, increasing in stringency if severe with a prediction of healthcare being overwhelmed and high mortality.⁶⁾

Exemplary policy/trigger structure

COVID-19 policy example (dates not to scale)

Period of Insurance 1: 12 months from 1st Sept 2019.

Trigger	DON + PHEIC + Civil Authority Restriction	Outbreak area	Worldwide
Cover	Loss of Gross Profit	Covered area	Australia

The indemnity period is chosen by the insured to reflect the time of the individual loss experience, which may vary between regions and insureds.

The **Extended Development Period** provides additional time for outbreaks that occurred (Trigger 1 met) during the respective Period of Insurance to develop into catastrophic events (Trigger 2 and Trigger 3 being met).

Outbreaks will always fall within the scope of the specific Policy in place at the time of publication of the respective DON (Trigger 1).



For illustrative purposes only.

Assuming policy was in place before the COVID-19 outbreak.

COVID-19 is not covered under new policies.

¹ DON = Disease Outbreak News report issued by the World Health Organisation

² PHEIC = Public Health Emergency of International Concern declaration issued by the World Health Organisation

INTERNATIONAL SOS SERVICES can be built into a tailored solution combining services and financial indemnification

ISOS can assist members before the policy is triggered with a number of Preparedness services e.g.

Exclusive Access to Pandemic Preparedness Site

- Stay informed with the latest pandemic updates, analyzed for emerging threats and trends.

Cutting-Edge Threat Monitoring Capability

- Proactive monitoring to keep you informed and ahead of potential risks with real time alerts.

Self-Services Information Portal

- A user-friendly platform that provides teams with information, guidance, templates and resources.

Annual Pandemic Preparedness Maturity Assessment and Review

- Comprehensive evaluation of your pandemic preparedness plans and issuance of a concise ESG compliance statement for your annual report

Webinars for key stakeholders

Financial Indemnification for expenses once triggers are met

Members can claim under the Insurance policy for Intl. SOS Consulting hours at a preferred rate. For these additional hours, the client will get access to –

A Dedicated Global Health Advisor

- Dedicated Senior Health Consultant acting as a focal point for advisory available to the client management team for call and documentation support
- Outbreak monitoring (fact-checked information)
- Outbreak risk assessment (risk exposure)
- Infectious disease risk mitigation (risk control)

Awareness and Education Content

- Support with workforce education and information (posters, notes, etc.)
- Provision of employee briefing and manager training delivered via webinars in English and, where possible, in specified language

Mpox redeclared as PHEIC

The latest Public Health Emergency of International Concern

- 14th August, the WHO Director-General declared mpox to be a Public Health Emergency of International Concern (PHEIC)¹ due to the upsurge in cases and rapid spread of mpox in Africa.
- The majority of infections have been reported from the Democratic Republic of the Congo (DRC), where a new strain of mpox, called clade 1b, has been detected and has spread to neighbouring countries.
- A previous PHEIC was declared for mpox July 2022 to May 2023, this was fuelled by a different strain, clade 2b. The PHEIC ended following a significant decline in reported mpox cases and no changes in the disease severity.
- The detection of the new strain of virus known as clade 1b (potentially more transmissible and severe disease), is largely the reason why the Emergency Committee voted in favour of again declaring a PHEIC. The supply of vaccines for mpox is limited.
- Since the latest PHEIC has been declared, there has been an imported case reported in Sweden. There will likely be further imported cases globally over the coming weeks.
- There are several outbreaks that are taking place simultaneously, and the epidemiology is different, but the predominant mode of transmission is sexual contact which was the main mode of transmission for the previous PHEIC.
- Another strain (clade 1a) currently confined to DRC, is primarily affecting children and is spread through multiple modes of transmission.
- Several countries have implemented screening measures for travelers arriving from mpox outbreak areas, e.g. China, Thailand.

This outbreak highlights the **constant threat from emerging and reemerging infectious diseases**, if not controlled they can become more transmissible between humans and **spread globally presenting a pandemic risk**.

¹) <https://www.who.int/news/item/14-08-2024-who-director-general-declares-mpox-outbreak-a-public-health-emergency-of-international-concern>



Questions and Answers

**This slide deck will be circulated
after the Webinar**

03



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