DIPHTERIA AMONG ASYLUM SEEKERS: OUTBREAK MANAGEMENT INSIDE A RECEPTION CENTER

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Introduction

Epidemiology of Diphteria

Epidemiology of Diphteria

Historical context

- Diphtheria, once dreaded, historically plagued childhood populations.
- Vaccination led to a significant decline in incidence, notably in Belgium.

Epidemiological Shift:

- Cases dropped from 7412 (1950-1959) to <15 (1980-2010) in Belgium.
- Resurgence with 30 cases (2010-2021), posing challenges despite high vaccination coverage.

Global Endemicity:

- Diphtheria remains endemic in several regions worldwide, including Southeast Asia, Africa, and parts of Europe.
- Constant threat to under-immunized populations, necessitating vigilant surveillance and response measures.

Recent Trends and Challenges

Recent Trends and Challenges

Resurgence Since 2022:

- Notable increase in diphtheria cases reported across Europe, including Belgium, since 2022.
- Emergence of clusters, particularly among vulnerable populations.

Persistent Challenges:

- Difficulty in eradicating diphtheria due to colonization of the nasopharynx.
- Threat posed by toxin-producing strains despite vaccine efficacy against clinical manifestations.

Urgent Response:

- Heightened concern for populations with low seroprotection levels
- Imperative for enhanced surveillance, vaccination strategies, and rapid outbreak containment efforts.

5 Cases

L. 16 years

Presentation:

- Young Pakistani girl
- Arrived in Belgium in February 2020 with family

Clinical Presentation:

- June 18: Consultation for sore throat
- June 19: Deterioration, admitted to hospital
- June 21: Surgical tonsillectomy, complications
- June 24-26: Multi-organ failure, ECMO, death

Diagnosis:

- Presence of pseudomembranes, multi-organ failure
- PCR and toxin test positive for C. diphtheriae

Management:

- Antibiotics, antitoxin (delayed), intensive care

E. 10 years

Presentation:

- Younger sister of L.

Clinical Presentation:

- June 24-25: Onset of sore throat symptoms
- June 26: Hospitalization, delayed treatment

Diagnosis:

- Epidemiological link, similar symptoms to L.

Management:

- Antibiotics, delayed antitoxin, isolation

O., Nurse

Presentation:

- Involved in care of L., vaccinated

Clinical Presentation:

- June 26: Onset of fever, sore throat

Diagnosis:

- Epidemiological link to L. , symptoms

Management:

- Antibiotics, no antitoxin, isolation

M. 2,5 years

Presentation:

- Younger brother of L. and E.

Clinical Presentation:

- June 25: Onset of symptoms, fever
- June 29: Hospitalization due to persistent fever

Diagnosis:

- Epidemiological link, positive PCR for C. diphtheriae

Management:

- Antibiotics, antitoxin, hospitalization

I. 5 years

Presentation:

- Child with unknown vaccination status

Clinical Presentation:

- June 29: Contact tracing, fever and cervical lymphadenopathy

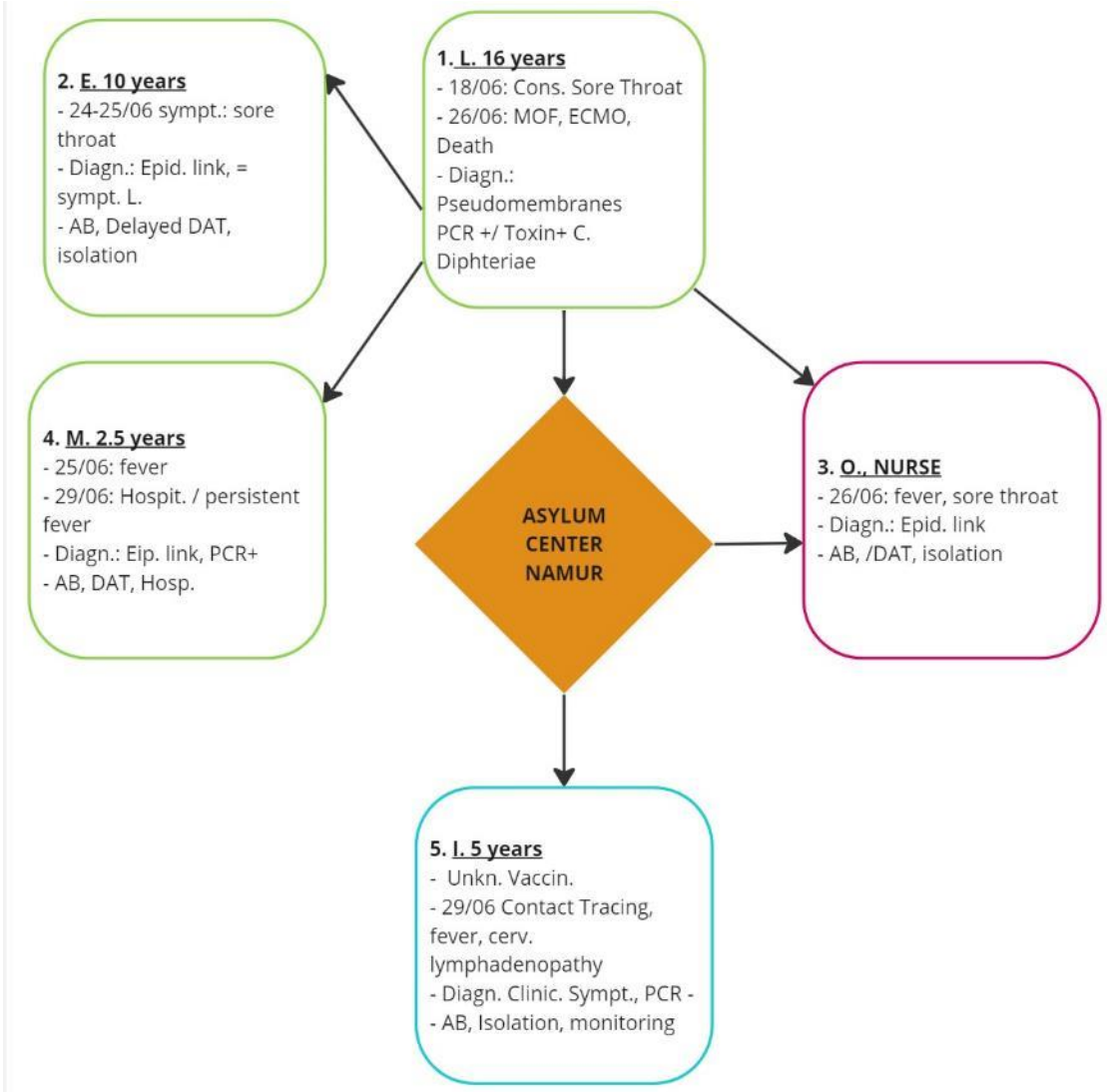
Diagnosis:

- Clinical symptoms, negative PCR

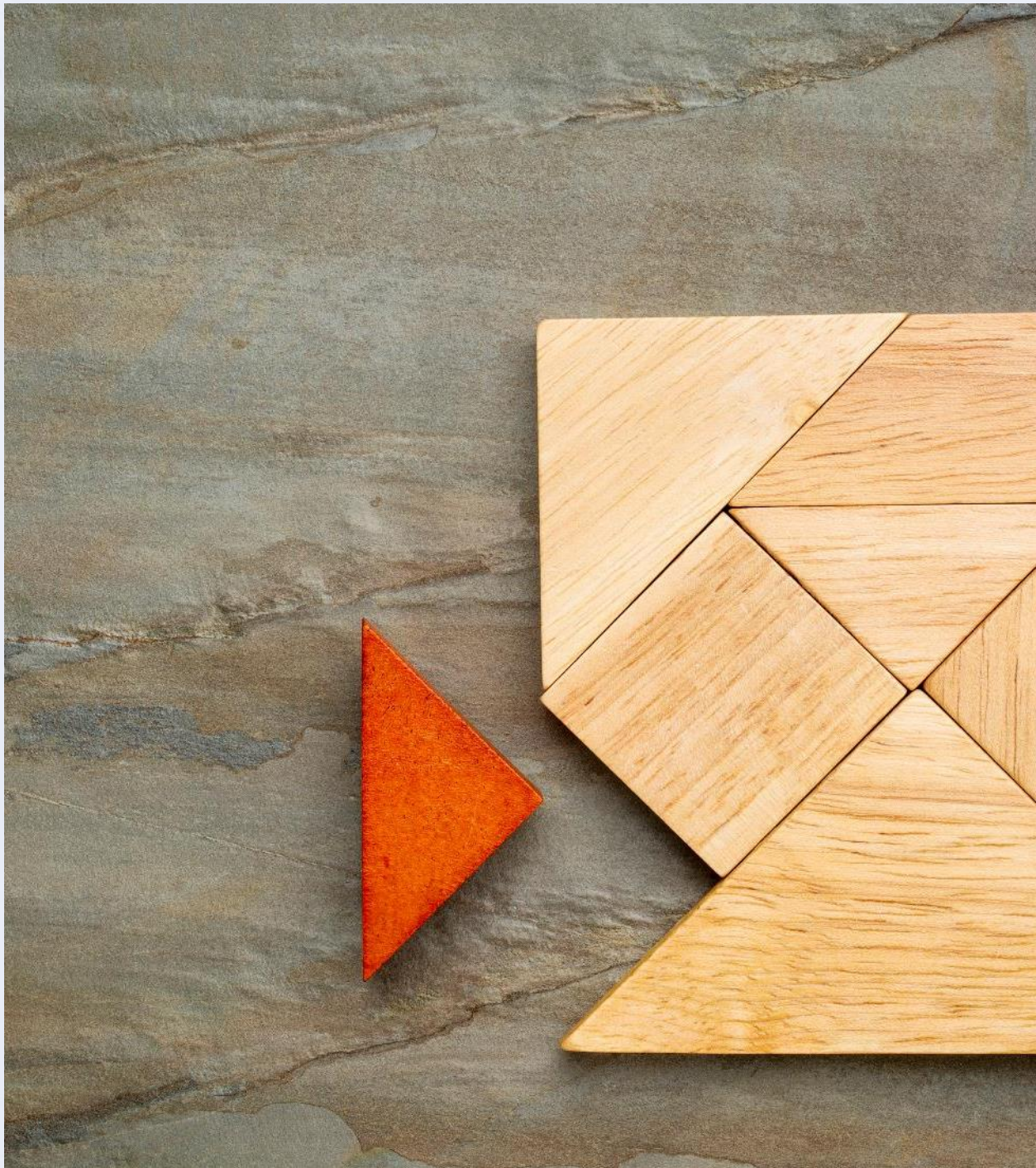
Management:

- Antibiotics, isolation, monitoring

Cases Conclusion



Actions Inside Center



Actions Inside Center 1/2

Initial Response:

- Immediate implementation of mask-wearing for all staff members
- Identification of high-risk contacts among residents and staff

Prophylactic Measures:

- Strategy focused on vaccination and antibiotic prophylaxis
- High-risk contacts defined as individuals living together or spending more than 4 hours with suspected or confirmed cases

Challenges:

- Large facility with 650 residents, including numerous families
- Active community with frequent interactions, especially among children
- Close contacts with infected individuals before diagnosis

Actions Inside Center 2/2

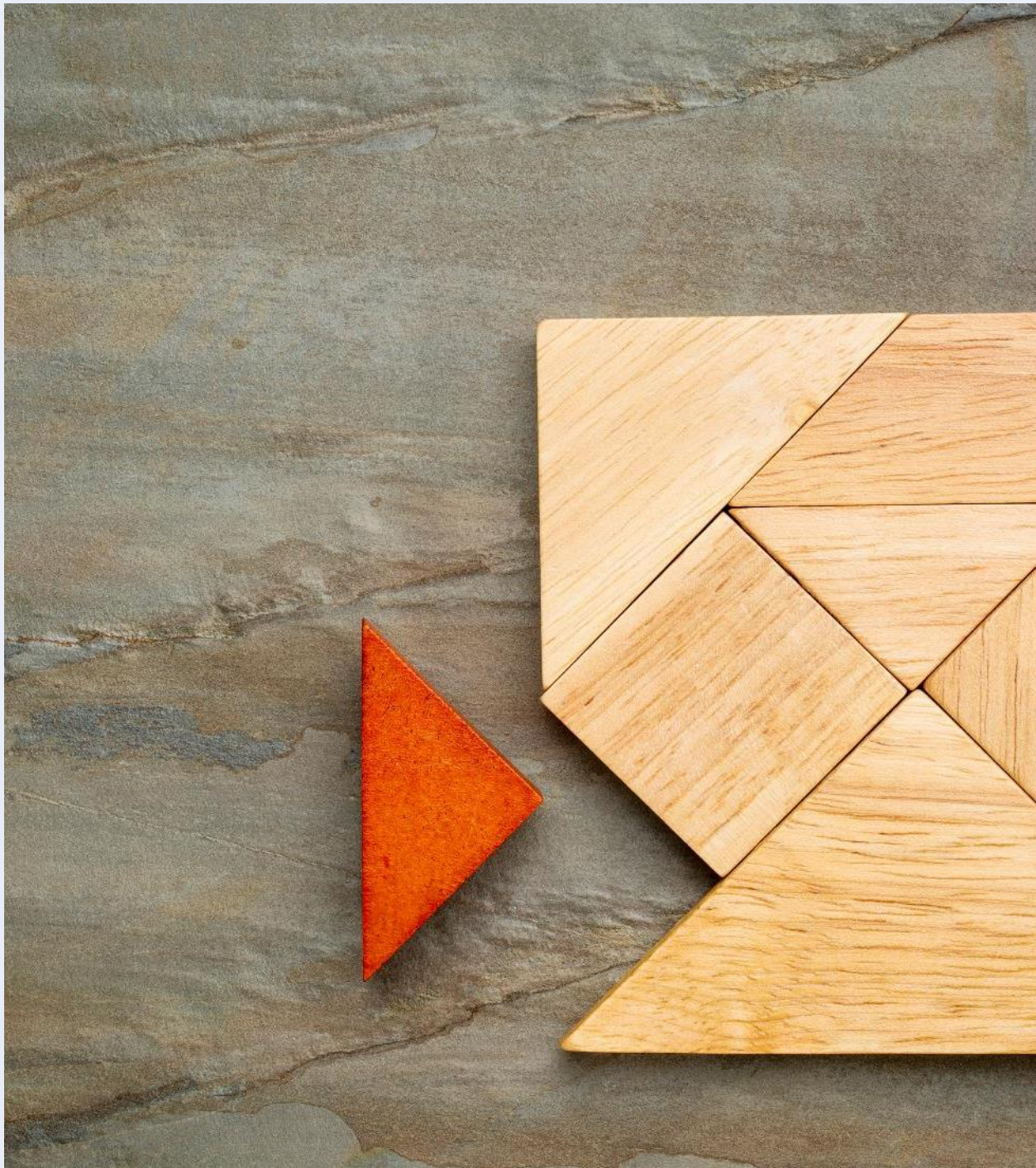
Implemented Strategy:

- Identification of high-risk contacts, prioritizing unvaccinated or incompletely vaccinated children
- Mass throat swabs and wound assessments
- Antibiotic prophylaxis initiation
- Vaccination catch-up to break potential transmission chains

Staff Support:

- OST (AVIQ), Medical team and occupational health involved in testing, vaccination, and prophylaxis
- Follow-up of staff members' vaccination status and antibiotic prophylaxis

Extended Actions at the Local Level



Extended Actions at the Local Level

Hospital Staff Management:

- Testing and prophylaxis for hospital staff exposed to infected patients
- Notification and follow-up by hospital hygiene services

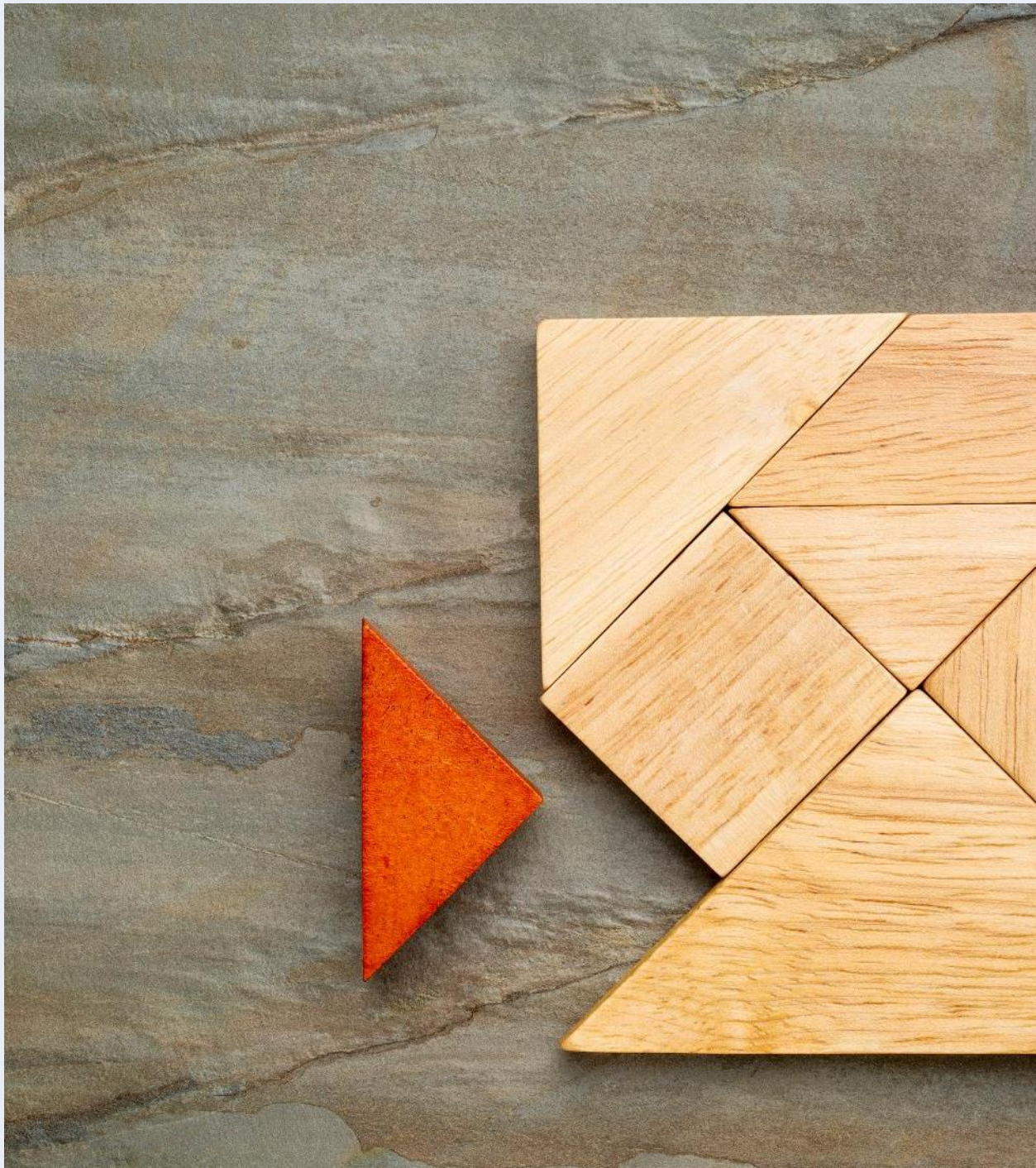
School Setting:

- Coordination with school health services for testing and prophylaxis of exposed students and staff
- Communication of recommendations to parents and schools

General Practitioners:

- Increased vigilance and testing for patients with suggestive symptoms
- Collaboration with health authorities for comprehensive response

Macroscopic Actions



Macroscopic Actions

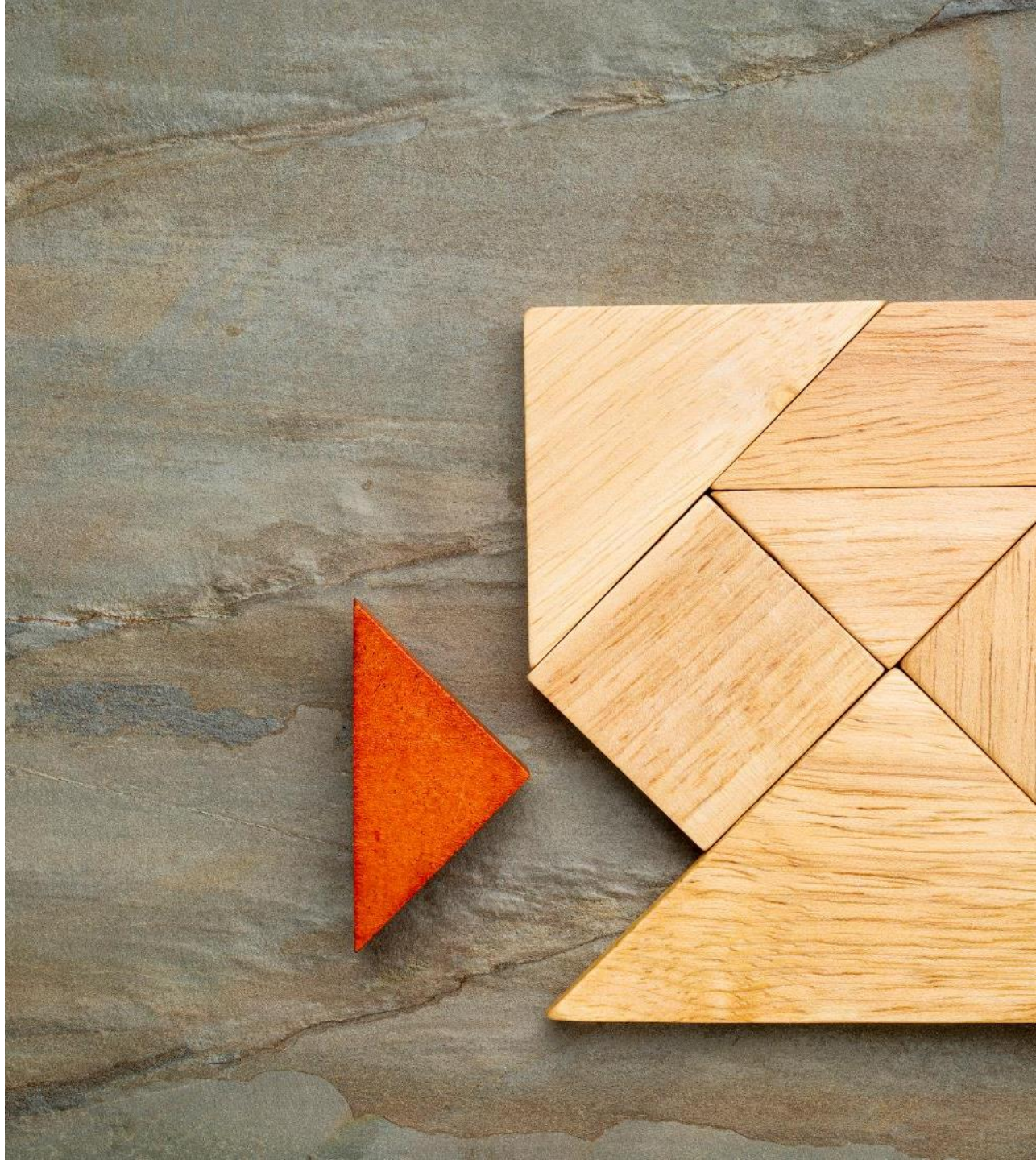
Primary Risk Assessment Meeting:

- Discussion on antitoxin availability and vaccination strategies
- Focus on vaccination among asylum seekers, particularly children
- Challenges in vaccination coverage and communication

Collaborative Efforts:

- Establishment of working group involving federal and regional entities, communities, and stakeholders
- Uniform communication plan for hospitals and general practitioners
- Update of vaccination guidelines based on recommendations

Conclusion



Conclusion

Summary of Actions:

- Swift response to cluster outbreak
- Comprehensive testing, prophylaxis, and vaccination efforts
- Collaboration between healthcare sectors and government agencies

Future Considerations:

- Continuous vigilance for potential outbreaks
- Strengthening vaccination programs and communication strategies
- Integration of lessons learned into public health protocols

Keys Takeaways

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- Early detection and response are critical in managing infectious disease outbreaks.
- Comprehensive testing, prophylaxis, and vaccination strategies are essential for controlling transmission.
- Collaboration between healthcare sectors and government agencies is crucial for effective outbreak management.
- Continuous vigilance and improvement of vaccination programs are necessary to prevent future outbreaks.

Acknowledgments

Acknowledgments

- Appreciation for the collaborative efforts of healthcare providers, government agencies, and community partners
- Recognition of the dedication and commitment of staff members involved in outbreak response

Questions ?

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