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POLICY BRIEF

One Health as a Strategic Compass

Governance, Emerging Diseases, Bacteriophages, Wastewater Surveillance & Migration Health

Based on the ONE-Bridge in Health Conference — Day 1 Proceedings
June 2026

Executive Summary

Day 1 of the ONE-Bridge in Health Conference established the conceptual, strategic, and scientific foundations of the One Health approach — situating it not as a specialised topic but as the defining governance paradigm for 21st-century public health. Across a full day of keynote addresses, scientific presentations, and roundtable discussions, a single conviction emerged with remarkable consistency: the era of siloed, sector-specific health action is over. The interconnection of humans, animals, and the environment demands new governance architectures, new scientific tools, and new political will.

The day covered six interlinked domains: One Health governance and strategic frameworks; bacteriophage therapy as an alternative to antibiotics; avian influenza (H5N1) pandemic risk; the molecular biology of host-pathogen interactions; wastewater-based epidemiological surveillance; and the intersection of migration health with the One Health agenda. This policy brief distils the key findings and translates them into recommendations for policymakers, scientists, and health system leaders.

10M+ Projected annual deaths from AMR by 2050	**77%** Of phage therapy cases showing clinical improvement	**56%** Of HIV diagnoses in Western Europe among migrants	**130K+** Wastewater samples analysed by Belgium's system

1. One Health Governance: The Missing Link Between Theory and Practice

1.1 A Paradigm Change 40 Years in the Making

The opening keynote drew on 40 years of WHO experience to deliver a sobering message: the conceptual case for One Health is settled — intersectoral action, systems thinking, and equity have been consensus positions since at least 1986. What has consistently failed is governance. A book found on a dusty WHO shelf, dated 1986, on intersectoral action for health was, as the speaker put it, 'if you change the date, it would have been extremely valid and true today.' The knowledge exists. The political and structural transformation does not.

The COVID-19 pandemic provided a double lesson: it demonstrated the profound interconnectedness of issues that determine health outcomes, and it made viscerally clear who is

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most vulnerable when systems fail. The poorest, the most excluded, the most marginalised paid the heaviest price. One Health, properly understood, is not merely a framework for managing zoonotic disease — it is an equity imperative.

CORE ARGUMENT	*One Health is not simply about AMR, zoonoses, and mosquitoes. It is the overarching paradigm of new public health — demanding intersectoral action, equity consciousness, community engagement, interoperable surveillance systems, joint financing, and joint accountability. Any approach that does not transform governance is not One Health; it is a project.*

1.2 Why Governance Transformation Requires Four Levels

The keynote outlined a four-level hierarchy for serious One Health implementation:

- Political: high-level political authority and cross-sectoral leadership that can override fragmented mandates and enforce joint priorities across ministries
- Strategic: selection of the right partners (including regions, municipalities, civil society, private sector), identification of optimal interventions with maximum impact, and attention to who has been excluded
- Evidence: evidence-based, evidence-informed action — grounded in both academic science and lived experience; precision public health tools (genomics, exposomics) that can measure inequalities and tailor interventions locally
- Operational: concrete mechanisms, interoperable systems, joint platforms, shared budgets, and plans that survive beyond the funding cycle of any single project

A critical warning was delivered: the chronic failure of One Health projects is structural, not scientific. Projects funded by European and other programmes frequently 'live as long as the funding is available' and 'leave nothing behind — not even a change of habits or mechanisms that will allow us to work together.' Sustainable One Health requires institutionalisation, not project cycles.

HONEST ASSESSMENT	*When asked directly whether he was optimistic about One Health implementation in Europe, the keynote speaker answered simply: 'No.' The connection between scientific excellence and political-governance transformation remains 'the biggest wall we have to pull down.' This must be named, not ignored.*

1.3 Precision Public Health and the Measurement of Inequalities

A productive exchange highlighted the concept of precision public health — the use of genomic, exposomic, and population-level data to tailor interventions to specific local contexts rather than copying generic national or international guidelines. The key insight: Greece, for example, has never systematically measured health inequalities across its population. Without measurement, there is no baseline, no accountability, and no evidence-driven policy design. Denmark, the Netherlands, and Sweden routinely measure and publish health inequality data; this is a prerequisite for intelligent policy, not an optional extra.

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2. Bacteriophage Therapy: A Promising Tool With Real Limitations

2.1 The Science of Phage Therapy

Bacteriophages — viruses that specifically infect and kill bacteria — represent one of the most scientifically compelling alternatives (or adjuncts) to antibiotics. Their key properties make them attractive: extreme host-specificity (often strain-level), self-limiting populations, environmental availability, and historical safety. Research presented from the University of Copenhagen highlighted emerging evidence from a large retrospective analysis of over 100 European compassionate-use phage therapy cases across 35 hospitals in 12 countries over 15 years.

- 77% of cases showed improvement in at least one clinical symptom
- 61% demonstrated complete pathogen eradication
- ~70% of treatments were administered in combination with antibiotics, showing predominantly synergistic rather than antagonistic effects
- Target pathogens were predominantly Pseudomonas aeruginosa and Staphylococcus (together ~90% of cases)
- Adverse effects were minimal in the studies reviewed

In aquaculture, phage cocktails showed significant protective effects against Vibrio and Flavobacterium infections in fish larvae, with intraperitoneal administration achieving up to 25% improved survival. This is particularly relevant given that aquaculture now accounts for more than 50% of global animal protein consumption and is the fastest-growing food production sector.

2.2 Critical Limitations and the Regulatory Gap

Despite genuine promise, phage therapy faces substantial barriers that must be honestly acknowledged:

- No approved randomised clinical trials (RCTs) in humans with positive results exist — the absence of RCT data is the primary reason the European Medicines Agency cannot approve phage products
- Phages are living organisms, not chemicals: previous clinical trials treated them as one-size-fits-all agents, fundamentally misunderstanding their biology; personalised phage selection is essential
- Temperate (lysogenic) phages can integrate into bacterial genomes, conferring virulence or fitness advantages — phage screening for AMR genes and virulence factors is mandatory before therapeutic use
- Bacterial resistance to phages occurs and must be monitored, though phage-resistant bacteria typically show reduced virulence and fitness
- Good Manufacturing Practice (GMP) requirements for phage products are complex, expensive, and poorly defined under current EU regulatory frameworks
- No specific EU legislative framework for human phage therapy exists, though EFSA manages phages as food additives and the EMA is developing a veterinary framework

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REGULATORY OPPORTUNITY	*The European Commission announced a targeted call for clinical RCTs on phage therapy safety and efficacy in 2025. This is a welcome development. Member states should actively participate, and EMA should expedite a dedicated regulatory pathway that acknowledges phage therapy's unique biological nature — requiring personalised approaches rather than standard pharmacological approval frameworks.*

3. H5N1 Avian Influenza: Real Pandemic Risk, Not Distant Threat

3.1 The Current Epizootic: An Unprecedented Situation

A detailed presentation from Aristotle University of Thessaloniki provided a comprehensive and alarming update on the current H5N1 (clade 2.3.4.4b) panzooic — the largest and most geographically extensive avian influenza event in recorded history. Key facts that must shape European preparedness policy:

- The current strain emerged through reassortment in the Mediterranean region around 2020, combining the original 1996 H5 haemagglutinin with a novel neuraminidase (N1 with a long stalk), significantly enhancing mammalian transmission potential
- In the US alone: 2,000+ poultry flocks infected, 1,083 dairy herds in 18 states, 71 confirmed human cases (at time of conference), and three cases with unknown exposure source — the last being of particular concern as a signal of possible silent human adaptation
- 647 different mammalian species infected during the current panzooic; 3,487 sea lions died in Peru; mass infections in fur-bearing animals (mink, foxes) in Europe
- In Europe, an unprecedented surge in wild bird HPAI infections was observed September–November 2025
- Experimental evidence confirms H5 haemagglutinin CAN mutate to support human-to-human airborne transmission (2012 ferret studies by Fouchier and colleagues); it is not merely hypothetical

3.2 The Pathway to Pandemic Potential

The virus is currently estimated to be at an intermediate position on the pathway to pandemic capability. It does not yet efficiently replicate in the human upper respiratory tract (the critical adaptation for sustained human-to-human transmission). However, the conditions for accelerated adaptation are clearly present: large dense mammalian farm populations (mink, dairy cattle) providing many viral passages; co-infection opportunities with human-adapted influenza strains; and existing reassortment with the novel N1 neuraminidase enhancing mucosal penetration. Finland has already begun offering H5N1 vaccination to high-risk workers — a response that other member states should evaluate.

SURVEILLANCE IMPERATIVE	*The three US human cases with unknown exposure source represent the most alarming signal in the current epizootic. Silent human adaptation — viral passaging in human populations without clinical recognition — is the highest-risk scenario for pandemic emergence. EU member states must immediately establish integrated sentinel surveillance covering wild birds, poultry, farmed mammals (especially mink and dairy cattle), and human workers in exposed*

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settings. PCR positivity should trigger whole-genome sequencing within 48 hours.

3.3 Biosecurity Gaps in Farm Settings

Farm-level biosecurity is the critical intervention point. Dairy cattle in the US became a major reservoir partly through milk contamination and spread during milking operations — a scenario entirely preventable with adequate biosecurity protocols. European fur farms (mink) represent a specific vulnerability given that: mink are susceptible to both avian and human-adapted influenza viruses; they provide ideal conditions for reassortment; and the 2022 Spanish mink outbreak demonstrated effective contact transmission between mink with early signs of airborne spread in ferret models.

4. Molecular Frontiers: Mucin Glycans, Salmonella Resistance & Novel Therapeutics

4.1 Mucin Glycans as Natural Anti-Infective Agents

Research from the University of Lille presented a compelling body of evidence that mucin oligoglycans — the complex sugar chains coating mucosal epithelial surfaces — actively attenuate bacterial and fungal virulence through multiple mechanisms. This represents a largely unexploited therapeutic frontier.

Key findings across five pathogen systems (Pseudomonas aeruginosa, Streptococcus mutans, Candida albicans, Vibrio cholerae, and Salmonella):

- Mucin glycans can downregulate quorum sensing, toxin secretion, and biofilm formation without killing bacteria — reducing resistance selection pressure
- Specific glycan structures (core 1, core 2 ± fucosylation) are required; isolated monosaccharides have no effect — demonstrating the importance of intact oligosaccharide structure
- Sialo-peptides mimicking mucin glycans showed broad-spectrum antimicrobial activity against gram-positive, gram-negative, and mycobacterial species, with effectiveness against multidrug-resistant strains
- Mucin glycan disruption (e.g., hypersialylation in cystic fibrosis) promotes chronic infection by Staphylococcus aureus, suggesting therapeutic restoration of glycan patterns as a strategy
- Bacteriophages that adhere to mucins (BAM model) show enhanced mucosal persistence and efficiency, suggesting phage-glycan combinations as a therapeutic approach

4.2 Chicken Genetics, Salmonella Resistance & Food Safety

Research on chicken glycobiology revealed that resistance to Salmonella colonisation in chickens correlates with specific differences in intestinal mucin glycosylation patterns — particularly fucosylation and sulphation. The domestication bottleneck (all commercial chickens derive from a single ancestral red junglefowl species) has dramatically reduced genetic diversity, with studies identifying 3% more deleterious mutations in domestic breeds versus their wild ancestors. This

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represents a systematic One Health vulnerability: industrial poultry production has sacrificed biological diversity — including disease resistance — for growth rate.

The research team is collaborating with a major industrial poultry genetics company to identify glycosylation-linked markers for selective breeding toward Salmonella resistance. This approach — combining molecular biology, industry partnership, and One Health goals — represents the type of translational science that conferences like ONE-Bridge should catalyse.

5. Wastewater-Based Surveillance: From COVID Tool to One Health Infrastructure

5.1 Belgium's Model: From Research to Policy Integration

Sciensano (Belgian National Public Health Institute) presented perhaps the most operationally advanced national wastewater surveillance programme in Europe — a system that evolved from a COVID-19 monitoring pilot in 2020 to a permanent public health infrastructure now covering SARS-CoV-2, influenza, RSV, polio, measles, and mpox, with ongoing development for AMR and drug epidemiology.

Key features of the Belgian model that should inform EU-wide implementation:

- Near real-time data: samples analysed twice weekly with a 2-day delay; dashboards updated publicly with risk-level indicators (high circulation, fast increase, increasing trend)
- Full data transparency: all national surveillance data published openly under a public access policy, enabling third-party tool development (e.g., hospital barometers for infection preparedness)
- Risk assessment integration: wastewater data formally incorporated into national risk assessment processes since September 2023, directly informing decisions by public health risk assessment groups
- Scalability demonstrated: within weeks of the 2024 mpox 1B alert, a validated assay was developed and monitoring began — possible only because infrastructure was already in place
- 130,000+ samples analysed since programme inception across 30–42 stations covering 45–50% of the Belgian population
- Genomic sequencing of wastewater enabled real-time variant detection, overcoming the lag inherent in PCR-based methods alone

5.2 Portugal's Zoonotic and Fungal Surveillance Contributions

The National Institute of Health Doutor Ricardo Jorge (Portugal) presented two important case studies demonstrating wastewater surveillance's One Health value beyond pandemic viruses. First, an ongoing hepatitis E surveillance study in pig farms detected genotypes 3C and 3F circulating in Portuguese pig populations at higher prevalence than fecal samples alone would suggest — critical information for a country that had not previously characterised the endemic burden. Second, wastewater surveillance of hospital networks detected Candida auris in five hospitals and two wastewater treatment plants despite no reported clinical cases — providing

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early warning of community colonisation for a pathogen that is extremely difficult to eliminate from healthcare facilities once established.

5.3 Making Environmental AMR Surveillance Fit for Purpose

The Dresden ONE-Bridge workshop outcomes, presented by TU Dresden, addressed a critical gap: while wastewater surveillance for pathogens is advancing rapidly, environmental AMR surveillance remains poorly standardised, insufficiently risk-oriented, and inadequately integrated with clinical and veterinary data. Workshop participants identified three priority actions:

1. **REC:** Define and regulate safe environmental antibiotic concentration limits: moving from arbitrary safety factors (1/10 of lowest known MIC) to ecology-based predicted no-effect concentrations, calculated using resistance cost distributions. Workshop data supported a revised approach based on the observation that 95% of resistant genes have a fitness cost below 0.4% — supporting a PNEC of MIC × 1/250 rather than 1/10.
2. **REC:** Establish standardised surveillance protocols: modular workflows with defined goals, clear method selection criteria (culture → qPCR → metagenomics based on thresholds), and comparable approaches across EU member states and German federal states.
3. **REC:** Integrate mobility data into risk assessment: in the environment, the host of a resistance gene matters less than whether the gene is mobile. Context-based metagenomics, ddPCR linkage analysis, ARG amplicon sequencing, and long-read sequencing must be incorporated into next-generation environmental AMR toolboxes.

6. Migration Health: An Underserved Pillar of One Health

6.1 Reframing Migration in the One Health Context

The closing roundtable on migration and One Health assembled one of the conference's most powerful panels, including WHO headquarters representatives and the Lancet Commission on Migration and Health. The core argument: migration is not a threat to be managed but a human reality to be included in One Health frameworks — not as a risk factor but as a demographic characteristic that shapes access to health services, exposure to environmental risks, and vulnerability to all One Health challenges.

Key facts that must inform policy design:

- 143,000 people attempted irregular crossings into Europe in the first months of 2025 — in a continent of 700 million people, this represents a minor demographic movement, not a 'mass migration crisis'
- More than 70% of migrants in Europe are intra-European migrants — not arrivals from other continents; the political narrative is systematically misleading
- Labor migrants (the majority of the international migrant population) pay taxes and health insurance contributions, financing the systems they rely on
- 56% of all HIV diagnoses in Western Europe occur among people born abroad — in countries like Iceland, Malta, and Norway, 80–90% of diagnoses are among migrants — making migrant-inclusive HIV prevention a mathematical necessity for reaching elimination targets

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- WHO headquarters data show 93 of 94 member states providing information confirm that inclusion of refugees and migrants into national health policies is increasingly a reality, and intersectoral collaboration is growing — though inclusion in emergency preparedness remains severely inadequate

6.2 Non-Communicable Diseases and Continuity of Care

A presentation from Heidelberg University emphasised that NCDs — cardiovascular disease, diabetes, cancer, respiratory disease, and neurological conditions — represent a non-negligible and systematically under-measured burden among migrant populations, yet are almost absent from One Health research agendas that focus on infectious diseases. Three dimensions of continuity of care are systematically disrupted for mobile populations:

- Relational continuity: the longitudinal patient-provider relationship is broken repeatedly by displacement, relocation, and administrative barriers
- Informational continuity: medical records are lost across borders, leading to repeated assessments and redundant diagnostics
- Management continuity: drug availability, treatment guidelines, and diagnostic protocols vary across countries in ways that create dangerous inconsistencies

The presenter's key recommendation: this is not an either/or question between specialist migrant services and integration into mainstream systems. A 'diagonal approach' is needed — special services for special needs, converging over time with regular health system infrastructure, while horizontal inclusion requires genuine tailoring (e.g., language mediation, culturally competent care) rather than administrative tokenism.

6.3 The Bioethics of One Health in Outbreak and Emergency Contexts

A provocative presentation from the University of Patras placed pandemic preparedness ethics at the centre of One Health governance. Drawing on historical pandemics from the Plague of Justinian (541 AD) through COVID-19, the presenter identified recurring ethical tensions that One Health frameworks must explicitly address:

- Individual rights vs. collective protection: lockdowns, mandatory surveillance, specimen collection, isolation, and border control all involve limitations on individual autonomy that require transparent legal justification
- Resource allocation in crisis: who receives limited vaccines, ICU beds, or treatments? No universal ethical formula exists — but absence of pre-established frameworks guarantees arbitrary and inequitable decisions
- Physician obligation and self-preservation: the American Medical Ethics Code both mandates care for patients during pandemics AND recognises physicians as finite resources; this tension must be resolved in advance, not during crisis
- Science by press release: COVID-19 saw mass retraction of prematurely published studies; fast-tracked approvals without adequate evidence led to rapid enthusiasm followed by rapid withdrawal; research ethics frameworks must be crisis-resilient, not crisis-abandoned
- Data stigmatisation: HIV and COVID-19 both demonstrated how surveillance data can be weaponised against vulnerable populations; anonymity and anti-discrimination protections must be designed into surveillance architecture

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7. EU Funding Architecture: HADEA and the EU4Health Programme

The conference opened with a practical presentation from HADEA (European Health and Digital Executive Agency) on the EU4Health programme (2021–2027, budget approximately €3.79 billion), clarifying key aspects relevant to One Health research consortia:

- EU4Health covers four priority domains: strengthening health systems, protecting people from cross-border health threats, making medicines accessible and affordable, and advancing digital health
- Two main funding mechanisms: grants (up to 60% eligible costs; exceptionally 80% for actions meeting criteria including ≥30% allocation to member states below 90% of EU average GNI per capita, or participation from ≥14 member states of which ≥4 are below 90% GNI threshold) and procurement (EU purchasing services, with IP ownership retained by the EU)
- Annual work programmes published publicly; all calls available on EU Funding and Tenders Portal (funded.europa.eu); 9 months minimum from call publication to grant signing
- Direct grants to identified bodies and to member states through joint actions (by invitation letter) represent a key mechanism for One Health joint actions like JAMRAI

FOR APPLICANTS	*The most common failure in EU4Health applications is misalignment between the proposal and the specific scope of the call for proposals. The Commission evaluates on three criteria: relevance, quality, and impact. Realistic, deliverable proposals outperform ambitious but unverifiable ones. National focal points for EU4Health in each member state can provide pre-submission guidance.*

8. Policy Recommendations

8.1 One Health Governance

4. **REC 1:** Institutionalise One Health — do not project-ise it

EU member states and the European Commission must create permanent, funded, legally-mandated One Health coordination structures — not time-limited projects. These should include national One Health platforms with representation from health, veterinary, environmental, food safety, and planning ministries; joint risk assessments; shared data standards; and co-funded surveillance. EU structural funds should be conditioned on demonstrating active One Health coordination.

5. **REC 2:** Measure what matters — including health inequalities

Every EU member state should establish baseline measurements of health inequalities at regional level, including by migration status, income, and social disadvantage. Without measurement, one health interventions remain inequitable by design. Greece and other southern European countries have critical gaps in inequality data that must be addressed as a precondition for evidence-informed One Health policy.

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8.2 Bacteriophage Therapy

6. **REC 3:** Establish a dedicated EU regulatory pathway for phage therapy

EMA should create a phage-specific regulatory framework that acknowledges the biological uniqueness of phages: their host-specificity, living nature, self-limiting populations, and the necessity of personalised rather than standardised treatment protocols. The new EU-funded RCT call is a necessary step; it must be accompanied by a pre-competitive manufacturing framework and GMP guidance tailored to phage products.

7. **REC 4:** Invest in clinical trial infrastructure for compassionate phage use

Establish a European phage therapy registry to systematically capture all compassionate-use cases with standardised outcome metrics. The retrospective data from Belgium and Georgia demonstrate clear signals of efficacy; a prospective registry would convert anecdotal success into regulatory-grade evidence at a fraction of the cost of traditional RCTs.

8.3 H5N1 Pandemic Preparedness

8. **REC 5:** Implement integrated H5N1 sentinel surveillance across all One Health sectors

EU member states must immediately establish or strengthen sentinel surveillance networks covering wild birds (year-round, not just outbreak response), poultry, farmed mammals (prioritising mink, dairy cattle, and fur animals), and human workers in high-exposure settings. Sequences from all positive detections should be uploaded to GISAID within 72 hours. ECDC should develop a common EU dashboard for H5N1 mammalian exposures.

9. **REC 6:** Evaluate pre-pandemic H5N1 vaccination strategies for high-risk workers

Following Finland's lead, EU health authorities should evaluate the evidence base and logistics for offering H5N1 pre-pandemic vaccination to workers in fur farms, dairy operations, poultry slaughter facilities, and veterinary services. This is not a full population strategy but a targeted biosecurity measure.

8.4 Wastewater Surveillance

10. **REC 7:** Implement the Urban Wastewater Directive AMR mandate with harmonised protocols

The new EU Urban Wastewater Treatment Directive mandate for AMR monitoring must be implemented with harmonised methodologies across member states. The EU-WISH joint action provides the framework; member states should commit resources and personnel to developing standardised SOPs for at minimum E. coli AMR, selected ARGs (including carbapenemase genes), and priority emerging pathogens by 2027.

11. **REC 8:** Adopt open data policies for national wastewater surveillance

Belgium's open data model — where all national surveillance data are freely accessible, enabling third-party tool development and hospital preparedness applications — should be adopted as a European standard. Public wastewater surveillance data serves collective health; there is no legitimate justification for restricting access.

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8.5 Migration Health

12. **REC 9:** Include migration health in all national One Health action plans

Migration health must be explicitly addressed in every national One Health action plan, not as an afterthought but as a core equity dimension. Specific requirements: migrant-disaggregated health data collection; inclusion of migrants in emergency preparedness frameworks (consistently identified as the primary gap); culturally and linguistically accessible primary care; and NCD continuity-of-care protocols across borders.

13. **REC 10:** Operationalise cross-border healthcare cooperation for mobile populations

The WHO concept of 'cosmopolitan health systems' — health architectures designed to cooperate across national borders for mobile populations — should be piloted in high-migration corridors within the EU. This includes: shared electronic health records with GDPR-compliant cross-border access; recognition of vaccination records and chronic disease management plans; and cross-border referral pathways for tertiary care that low-income countries cannot afford to maintain independently.

14. **REC 11:** Fund longitudinal migrant health research on NCDs

EU4Health and Horizon Europe should specifically fund prospective longitudinal studies of NCD burden among migrant populations. The current evidence base is patchy, retrospective, and inadequate for policy design. Priority conditions: cardiovascular disease, type 2 diabetes, mental health disorders, and neurological conditions among children.

8.6 Antibiotic Stewardship and Dispensing Reform

15. **REC 12:** Mandate prescription-only access to antibiotics across all EU member states

Antibiotic dispensing without prescription — until very recently commonplace in Greece, still common in many southern European countries — must be universally prohibited. Greece's recent reform is welcome; EU-level enforcement mechanisms should be strengthened. Pharmacists should be required to document dispensed prescriptions in national surveillance systems, enabling real-world consumption tracking.

16. **REC 13:** Reform antibiotic packaging to align with prescribed treatment courses

Antibiotic packaging should contain exactly the number of tablets prescribed, as in Norway and Portugal, preventing both stockpiling and premature treatment termination. This requires pharmaceutical industry engagement and potentially legislative mandates. The resulting reduction in leftover antibiotics and their environmental persistence represents a meaningful One Health intervention with immediate implementability.

9. Conclusion

Day 1 of the ONE-Bridge Conference delivered a foundational message: One Health is not a theory waiting to be tested. It is an urgent operational necessity that has been understood for decades and failed repeatedly — not for lack of knowledge but for lack of governance transformation. The speakers who engaged most directly with this reality — including a former WHO Director of Policy and Governance — were honest about the failure modes: over-intellectualisation without political translation, project-based implementation without

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institutionalisation, and the persistent disconnection between scientific communities and the decision-makers whose choices determine health outcomes.

The day's scientific presentations — on bacteriophages, H5N1, mucin glycobiology, wastewater surveillance, and migration health — all pointed toward the same convergence: the tools exist. The evidence accumulates. What remains is the political and institutional architecture to deploy them equitably, sustainably, and at scale. ONE-Bridge, and the European One Health movement more broadly, exists to build that architecture. Day 1 named the challenge with unusual directness. The remaining days must define the path forward.

CLOSING CHALLENGE	*One Health will succeed when it is not a project — when it is the way governments make decisions, the way scientists design their research, and the way citizens understand their relationship with the living world around them. Until then, conferences like ONE-Bridge play a critical role: building the shared language, the shared evidence base, and the shared political will without which transformation cannot happen.*

Sources

This policy brief is based exclusively on the ONE-Bridge in Health Conference Day 1. Presentations referenced include: keynote by the former WHO Director of Policy and Governance (adjunct professor, Boston School of Public Health); bacteriophage therapy by University of Copenhagen (evolutionary genomics); H5N1 by Aristotle University of Thessaloniki (molecular microbiology); mucin glycobiology and Salmonella resistance by University of Lille (Institute for Social and Functional Glycobiology); wastewater surveillance by Sciensano (Belgium), National Institute of Health Portugal, and TU Dresden; HADEA/EU4Health by the European Health and Digital Executive Agency; and the migration and One Health roundtable featuring WHO headquarters (Health and Migration), Heidelberg University (population medicine and health equity), ECDC (HIV epidemiology), and the Lancet Commission on Migration and Health. ONE-Bridge consortium: University of Patras, Technical University Dresden, CNRS France, ISGlobal Spain, EMVIO.

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