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POLICY BRIEF

Digital Innovation & AI for One Health

From Fragmented Data to Intelligent Surveillance, Prediction & Decision Support

Based on the ONE-Bridge in Health Conference — Day 4 Proceedings
June 2026

Executive Summary

Day 4 of the ONE-Bridge in Health Conference placed digital innovation and artificial intelligence at the centre of a comprehensive discussion on the future of One Health. The day demonstrated with unusual clarity both the extraordinary potential and the genuine limitations of AI-based approaches for surveillance, prediction, risk assessment, and decision support across human, animal, and environmental health domains.

Across six sessions covering AIoT for digital health, machine learning for disease spread prediction, multivariate spatial-temporal surveillance, AI risk assessment, evidence data ecosystems, adaptive neural networks, epidemiological AI modelling, and closing reflections from One Health student organisations, a consistent architecture for the way forward emerged: AI is not a shortcut to One Health — it is an enabling infrastructure that amplifies the quality of governance, surveillance, and decision-making when built on clean, harmonised, and ethically sound data foundations.

86–93% Accuracy of smartphone-based respiratory disease detection (U. Patras AIoT lab)	**>0.75** R^2 correlation of wastewater viral load with COVID-19 hospitalisations (Greece)	**4,000+** Traffic sensors used as mobility proxy for viral spread prediction (Madrid)	**5,000+** Students in One Health Students Greece — the future workforce for integrated surveillance

1. AIoT for Digital One Health: Vision and Current State

1.1 The Artificial Intelligence of Things (AIoT) in Health

Research from the IoT Laboratory at the University of Patras, developed in partnership with Pfizer, demonstrated practical applications of AIoT in healthcare and One Health monitoring. The core concept: integrating AI with sensor networks, wearables, smart clinical infrastructure, and environmental monitors to create continuous, personalised, population-level health intelligence.

Key applications demonstrated included smartphone-based respiratory disease diagnosis (cough analysis and lung auscultation), wearable-based allergy gesture recognition, indoor air pollution-health interaction studies across five European countries, sclera image analysis for metabolic biomarker detection, sheep vital signs and mastitis monitoring, bird-turbine collision detection, and crop/soil/water quality monitoring for agricultural One Health. The vision: a unified digital ecosystem connecting human, animal, plant, and environmental data streams.

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1.2 Technical Findings of Particular Policy Relevance

- Smartphone-based respiratory diagnosis achieves 86–93% accuracy with processing times of 1–5 seconds and runs entirely locally (no cloud data transmission) — addressing both real-time performance and data privacy simultaneously
- Crowdsourced allergy mapping (combining Twitter analytics, fixed environmental sensors, and wearable gestural data) demonstrates hybrid human-machine sensing as a scalable approach to population health surveillance with minimal infrastructure cost
- Indoor air pollution studies across five European countries demonstrate super-additive (synergistic) effects of co-occurring pollutants — individual pollutant monitoring underestimates actual health risk, a finding with direct implications for EU air quality standards
- Sclera biomarker imaging suggests non-invasive early detection of metabolic conditions (jaundice indicators, liver function markers) via smartphone camera — a potentially transformative tool for primary care in under-resourced settings
- Animal health monitoring (sheep vital signs, mastitis, barn climate) demonstrates One Health surveillance convergence — the same IoT platform can monitor human occupants, livestock, and environmental conditions simultaneously

CRITICAL CHALLENGE	*The entire AIoT vision described — from nano-robots in the bloodstream to swarm wearables collecting regional health data — requires addressing four persistent barriers: data heterogeneity and noise, real-time latency at the computational edge, lack of properly annotated clinical datasets, and explainability of AI outputs for clinician trust. None of these is primarily a technical problem. All four are governance, standardisation, and institutional cooperation problems.*

2. Machine Learning for Disease Spread Prediction

2.1 A Taxonomy of Approaches

Research from Universidad Carlos III de Madrid presented a systematic comparison of three modelling families for respiratory virus spread prediction: mathematical models (differential equation compartment models), agent-based simulators, and machine learning models. A key finding with governance implications: none of these families is sufficient alone — ensemble meta-models combining all three consistently outperform individual approaches.

The ML approaches demonstrated included autoregressive models and LSTMs for time-series incidence prediction, convolutional-LSTM models for spatiotemporal COVID-19 spread mapping across Madrid, and integration of traffic data (4,000+ sensors) and public bike-sharing trip data as mobility proxies. Adding mobility data to incidence-only models improved predictive accuracy, particularly in districts with denser sensor coverage — a clear argument for public investment in mobility data infrastructure.

2.2 Key Lessons for One Health Application

- Traffic data alone is insufficient as a mobility proxy — it reflects vehicles, not population movement between districts; public transport and micromobility data (bike trips) proved more informative

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- Combining COVID incidence images with mobility images in dual-channel convolutional models substantially outperformed either data stream alone, demonstrating the consistent principle that data integration improves predictions
- Weather data (temperature, precipitation, solar radiation) adds meaningful predictive value over mobility data for respiratory virus spread — another argument for real-time meteorological integration in public health surveillance systems
- The same ML architecture applied to COVID-19 spread is being extended to olive fly plague prediction using satellite imagery and meteorological data — demonstrating cross-domain One Health applicability
- For very low-incidence viruses or emerging pathogens, time-series length matters more than peak incidence values: as long as sufficient temporal observations exist, models can be fitted regardless of absolute case numbers

GOVERNANCE GAP	*All ML disease prediction models presented used retrospective data for training and validation. Not a single public health authority is currently using such models prospectively for real-time decision support. The gap between published methodology and operational deployment is the defining challenge of this field. Bridging it requires not just technical validation but institutional adoption pathways, liability frameworks, and communication strategies for presenting probabilistic predictions to decision-makers.*

3. Spatial-Temporal Surveillance: Convex Hull Control Charts

Research from the University of Patras and University of Piraeus introduced a novel multivariate spatial-temporal surveillance method combining C-charts (for event count monitoring) with convex hull-based statistics (for spatial distribution monitoring). The method simultaneously detects abnormal event counts AND abnormal spatial clustering — capturing outbreak signals that count-based monitoring alone would miss.

The method was validated on 5+ years of emergency medical calls (112) from Montgomery County, USA, with GPS coordinates and timestamps. Results demonstrated that the spatial distribution component detected clustering anomalies that the count chart alone did not flag, and that specific geographic concentrations could be identified at the time of the signal — enabling spatially targeted response rather than diffuse system-wide alerts.

- The upper control limit for the spatial statistic is analytically intractable (terms are not independent), requiring simulation; the authors derived closed-form parameter equations for a Box-Cox distribution fitted to the simulated statistic, enabling real-time computation without Monte Carlo simulation at the operational level
- Potential One Health extensions include: disease outbreak detection with spatial localisation, environmental contamination event monitoring (chemical or biological), animal disease cluster detection in farms or wildlife areas, and emergency services resource optimisation
- The 3-day sampling interval used in the demonstration is appropriate for chronic disease surveillance but would need to be shortened to hours for acute outbreak detection — infrastructure for high-frequency spatial event data must precede method deployment

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4. AI-Based Risk Assessment: Hospitals and Swimming Pools

4.1 Indoor Air Quality and Pathogen Risk in Hospital Settings

Research from the University of Patras quantified carcinogenic risk (PM1, PM2.5, PM10) and non-carcinogenic infection risk (SARS-CoV-2, adenovirus, bacteria) in hospital rooms pre- and post-air purifier intervention using probabilistic Monte Carlo simulation (10,000 iterations) with temperature and humidity as input distributions.

- Air purifiers reduced PM-related cancer risk by 7–15% across particle size fractions in both a doctor's room and an emergency room — all risks remained below WHO thresholds, but the method quantifies marginal benefits of interventions previously evaluated only qualitatively
- SARS-CoV-2 and adenovirus infection probabilities were very low in both rooms, with slight COVID-19 increases post-intervention in one room consistent with an infected person present during sampling
- PM2.5 showed the strongest correlation with SARS-CoV-2 viral load ($r \approx 0.8$), supporting the hypothesis that particulate matter acts as a carrier for viral aerosols — with direct implications for ventilation standards in healthcare facilities
- Humidity showed a protective negative correlation with viral concentrations — increasing relative humidity reduces viral aerosol burden, informing HVAC design standards for hospitals and schools

4.2 Swimming Pool Bacteria Risk: Monte Carlo vs. Machine Learning

A complementary study assessed infection risk from Pseudomonas aeruginosa in Greek swimming pools using both Monte Carlo simulation and random forest machine learning, enabling methodological comparison. Both approaches identified chlorine concentration as the dominant protective factor (correlation coefficient ≈ 0.73), with bacterial dose and aerobic bacterial count as the primary risk-amplifying variables.

- Random forest achieved 97% precision and 99% recall on the risk classification task — strong performance, but trained and evaluated on a small, single-setting dataset; external validation is essential before any regulatory application
- The key methodological finding: Monte Carlo provides mechanistic probabilistic estimation; random forest learns patterns directly from data. Both approaches agreed on dominant risk drivers (chlorine, pathogen dose) despite entirely different architectures — mutual validation strengthens confidence in the findings
- Future extensions: quantitative bacterial risk assessment (currently limited by presence/absence data only), seasonality modelling, and extension to other aquatic environments including open-water bathing areas — relevant to beach water quality under climate change

5. The One Health Data Ecosystem: Evidence, Fragmentation and Solutions

5.1 The Scope of the Data Challenge

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A presentation from the University of Ioannina and Brown University provided systematic perspective on the state of One Health data. The honest assessment: the vast majority of One Health evidence is fragmented, heterogeneous, and poorly accessible. Specific challenges include lack of standardised terminologies and ontologies; inconsistent data quality across sources; different methodologies across disciplines; limited integration of qualitative, quantitative, and genomic data; inadequate computational and analytical infrastructure; difficulty identifying causal pathways; institutional and cultural barriers to sharing; and limited capacity and training.

5.2 Evidence Maps as a Solution Architecture

Evidence maps — rigorous, transparent, and visually interactive synthesis tools that organise policy-relevant evidence according to a defined framework — were presented as the most practical available solution for transforming fragmented One Health data into policy-usable knowledge. Key properties: they support different types of questions and lines of evidence (qualitative, quantitative, epidemiological, basic science); they serve multiple functions simultaneously (scoping, decision-making, research commissioning, accountability, gap identification); and they create living repositories rather than static documents.

- An ongoing evidence map within the EU-WISH wastewater surveillance project is systematically accumulating quantitative efficacy studies for wastewater-based epidemiology — this will be the first rigorous synthesis of the field's effectiveness evidence
- A weight-of-evidence map on air quality and health (developed as part of the team's work) demonstrated that only a small fraction of air quality-disease associations are robustly supported by strong evidence, despite extensive publication volume — highlighting the importance of distinguishing signal strength before policy commitment
- Research road maps derived from evidence maps — using WHO/UN methodology with 'quick wins', 'best buys', and 'game changers' action categories — provide the missing link between evidence synthesis and implementable policy priorities

STRUCTURAL NEED	*One Health does not yet have a comprehensive evidence map. This is a gap that the ONE-Bridge project and its successor activities should explicitly address. Without systematic evidence mapping, policy makers cannot distinguish robust One Health findings from preliminary observations, and resource allocation remains driven by advocacy rather than evidence.*

6. Wastewater Surveillance: SARS-CoV-2 and Omicron Subvariants

Research from the National Public Health Organisation of Greece (EODY) presented a large-scale analysis of the relationship between wastewater viral load and three clinical markers — hospitalisations, intubations, and deaths — across approximately three years of Omicron subvariant circulation (2022–2025), covering laboratories accounting for 70% of the Greek population.

- Wastewater viral load correlates strongly with all three clinical markers ($R^2 > 0.75$ for hospitalisations, lower but still high for deaths), with zero-week time lag for hospitalisations and a consistent two-week lag for intubations and deaths — enabling wastewater as a predictive tool for severe disease burden

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- Segmentation analysis identified eight distinct time periods with different hospitalisation-to-viral-load ratios, showing alternating high and low severity periods consistent with fluctuations in population-level immunity rather than variant dominance
- Critically: the death-to-viral-load ratio shows a steady, sustained decline across the entire observation period — attributed to better clinical management, availability of antiviral treatments, and accumulated population immunity. This demonstrates that wastewater surveillance can track not only disease incidence but improvements in treatment effectiveness
- Segmentation pattern changes did not align consistently with Omicron subvariant dominance periods — suggesting that variant identity alone is an insufficient predictor of clinical severity; population immunity dynamics dominate the signal
- The national Greek wastewater surveillance network (covering Athens, Patras, Crete, Ioannina, and other cities) represents operational infrastructure that has directly informed national public health risk assessment — a model for EU-wide harmonisation

7. AI in Practice: Adaptive Networks and Epidemiological Modelling

7.1 Hybrid Adaptive Neural Networks

Research from the University of Valparaíso (Chile) addressed a fundamental limitation of standard neural networks: their inability to adapt to evolving systems without retraining. Applied to wastewater-based SARS-CoV-2 surveillance in Peru and Chile, the researchers found that no standard correlation measure (Pearson, Spearman, distance correlation, or copulas) reliably captured the complex, nonlinear, time-lagged relationship between wastewater viral load and reported human cases across different regions.

- The asymmetric, non-stationary nature of the wastewater-to-population signal requires networks with adaptive activation functions — standard sigmoid or ReLU functions fail to capture the recurrent patterns and regime changes in epidemiological data
- Spoku transfer functions (with four hyperparameters controlling adaptivity) demonstrated superior performance compared to standard activations across wastewater-SARS-CoV-2 modelling, bacterial growth curve fitting (Klebsiella cobatia adaptation to temperature and pH), and breast cancer tissue discrimination (improving the 80% accuracy ceiling common with standard approaches to 97%+ on Wisconsin diagnostic dataset)
- Bacteria do not have brains — but their adaptive behaviour (biofilm formation, growth rate regulation, antibiotic resistance mechanisms) is a fully adaptive one-server algorithm from which AI system designers can learn. The argument: intelligence in the natural world does not require consciousness; functional adaptivity is the relevant property

7.2 Large Language Models and Agent-Based AI for Epidemiology

A presentation from Switzerland outlined the rapidly evolving landscape of AI in medical microbiology and epidemiology, structured around two primary AI capabilities: categorisation (pattern classification — from gram-positive/negative to AMR susceptibility) and information access (LLMs processing and synthesising vast knowledge repositories). Both capabilities are advancing exponentially.

- Google's MedPaLM 2 achieved 86.5% on US medical licensing board exams two years ago — performance that has since substantially improved. Current agent-based LLMs

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(GPT-5.1 and equivalents) access real-time databases (PubMed, ENA, institutional SOP repositories) rather than relying on static training data, dramatically reducing hallucination risk

- A live demonstration showed an LLM collecting influenza incidence data from official health authority websites across 10+ European countries, organising it into a comparative weekly table, and generating visualisations — in a single prompt. This task previously required days of manual data collection
- Coding performance of current AI models substantially exceeds 90% of human coders on Elo-rated benchmarks — meaning software for outbreak analysis, epidemic curve generation, and phylogenetic visualisation can now be generated on demand without specialist programming skills
- Three frontier applications highlighted from Nature 2025 reviews: transformer-based foundational models for epidemic time-series prediction (filling data gaps and forecasting trajectories); graph neural networks for identifying hidden transmission routes in outbreak networks; and structural AI (AlphaFold/ESMFold) for predicting immune escape mutations that may neutralise vaccine protection

HONEST LIMITATION	*All published AI epidemic models are retrospective. No public health authority has yet prospectively deployed AI for real-time epidemic decision support. The primary barriers are not technical: they are trust, validation frameworks, liability structures, and the institutional risk-aversion that comes from high-stakes decision environments. A prospective validation programme — running AI predictions in parallel with existing systems without changing decisions — is the necessary next step.*

7.3 AI for Pathogen Identification and AMR Control

Research from the University of Thessaly demonstrated explainable AI applied to RAMAN spectroscopy for rapid bacterial identification across 30 pathogen species — achieving fast, accurate classification without culture-based confirmation, with explainable AI methods revealing which spectral features drove each prediction. Additional applications included deep learning for AMR gene detection in wastewater metagenomes, machine learning prediction of milk quality from somatic cell counts and environmental variables, subclinical mastitis prediction from 267 sheep farms (hygiene conditions and milking practices as dominant predictors), and microplastics classification by type using spectroscopic data with explainable AI.

A new study (published the week of the conference) estimated global population exposure to upstream gas flaring (2016–2023) by combining satellite observation with population density data — demonstrating that millions live near flaring sites with exposure concentrated in a small number of countries, and that exposure increased in some regions even as flaring volumes declined because activity moved geographically closer to population centres.

8. Student-Led One Health: The Next Generation

The conference closed with presentations from One Health Students Greece — a student federation founded in 2021 with over 5,000 members from across Greek universities, spanning medicine, veterinary science, pharmacy, biology, agriculture, public health, engineering, and environmental science. The organisation is a member of the International Student One Health Alliance (ISOHA), which advises the WHO youth committee.

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A student team from Aristotle University of Thessaloniki also presented IDERM — a smartphone application for preliminary skin condition assessment using AI image classification, developed entirely by students in collaboration with clinical experts. The app addresses medical anxiety and rural access barriers by providing preliminary assessment before directing users to verified local doctors. It is undergoing validation for clinical deployment.

CONFERENCE CLOSING REFLECTION	*The conference chair closed Day 4 with a direct message: 450 registrations, 60+ speakers from 11 countries, four days covering zoonosis, climate change, AMR, and AI — but the fundamental challenge remains the same as it was on Day 1. The science is advancing. The cooperation is growing. The tools are extraordinary. But the decisions are made by politicians, and politicians' time horizons are four years. One Health's solutions require decades. Closing this gap between scientific consensus and political will is the defining challenge of the field.*

9. Policy Recommendations

9.1 Digital Infrastructure for One Health Surveillance

1. **REC 1:** Invest in unified One Digital Health ecosystems

EU member states should fund the development of integrated digital platforms that enable human, animal, and environmental health data to flow between authorised systems in real time. This requires: standardised terminologies and ontologies across sectors; interoperability mandates for national surveillance IT systems; and federated data architectures that preserve sovereignty while enabling cross-border analysis. The concept of 'One Digital Health' — the convergence of digital health and One Health — should be formally adopted as a policy framework by the European Commission.

2. **REC 2:** Deploy real-time mobility data for epidemic prediction

Public transport authorities should mandate open data publication for ridership and trip patterns at sufficient spatial and temporal granularity to serve as inputs to epidemic prediction models. The Madrid experience demonstrates that public bike-sharing trip data outperforms traffic sensors as a mobility proxy. Cities with 100,000+ inhabitants should be required to maintain open-format mobility data streams compatible with public health surveillance systems under a revised EU Urban Wastewater and Digital Health framework.

9.2 AI Governance and Explainability

3. **REC 3:** Mandate explainability standards for AI tools in clinical and public health settings

Any AI tool deployed for clinical decision support or public health risk assessment should meet defined explainability standards — clearly communicating which variables drove the output, the confidence level, and the training data characteristics. The EU AI Act's 'high-risk AI system' category should be applied consistently to all diagnostic, predictive, and triage AI tools in One Health contexts. Procurement criteria for public health IT systems should include explainability requirements.

4. **REC 4:** Establish prospective AI validation programmes in public health

European public health authorities, in collaboration with ECDC, should establish parallel validation tracks for AI epidemic prediction tools — running models prospectively alongside existing

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surveillance systems during influenza, respiratory syncytial virus, and other seasonal disease cycles, without yet changing decisions. This will generate the prospective evidence base currently absent from the literature and build institutional familiarity before high-stakes deployment.

9.3 Data Quality, Harmonisation and Ethics

5. **REC 5:** Prioritise data quality over data quantity in One Health AI

A clear message from the Day 4 AI methodology session: the primary source of AI failure in medicine is not algorithm design — it is data quality, representation bias, and inappropriate metric selection. EU One Health data collection programmes should establish minimum quality standards (completeness, annotation, harmonisation) as preconditions for AI application, not afterthoughts. Geographic representation bias — currently heavily weighted toward Europe and North America — must be addressed in any AI tool intended for global One Health use.

6. **REC 6:** Develop and maintain a One Health evidence map

The EU-WISH wastewater surveillance evidence map currently in development should serve as a template for a comprehensive One Health evidence map covering all major surveillance domains. This should be a living, continuously updated resource hosted by ECDC or a designated WHO European office, using rigorous systematic review methodology, and structured around policy-actionable question frameworks including the weight-of-evidence grading approach demonstrated in the air quality domain.

9.4 Hospital and Environmental Risk Assessment

7. **REC 7:** Integrate probabilistic risk assessment into healthcare facility design standards

The hospital indoor air quality study demonstrates that Monte Carlo-based probabilistic risk assessment can quantify the health benefits of ventilation improvements and air purification systems in terms directly comparable to WHO thresholds. EU building codes and healthcare facility standards should adopt probabilistic PM2.5/PM1 carcinogenic risk assessment as a design criterion for hospitals, schools, and other densely occupied public buildings. Humidity targets should be explicitly included in HVAC standards given demonstrated protective effects against viral aerosol transmission.

8. **REC 8:** Expand swimming pool and bathing water surveillance to include AI-assisted risk assessment

The swimming pool Pseudomonas risk study demonstrates that chlorine concentration is the dominant controllable risk driver — a finding actionable at facility management level. National public health authorities should pilot AI-assisted real-time risk monitoring in public swimming facilities as a practical, low-complexity One Health application with clear regulatory relevance. Extension to marine and freshwater bathing water under climate change conditions should be prioritised.

9.5 Wastewater Surveillance Operationalisation

9. **REC 9:** Extend national wastewater surveillance to include clinical severity ratio monitoring

The Greek national wastewater surveillance experience demonstrates that tracking the ratio of clinical outcomes (hospitalisations, ICU admissions, deaths) to wastewater viral load — rather than viral load alone — provides substantially richer public health intelligence. This ratio encodes population immunity dynamics, treatment effectiveness, and variant severity simultaneously. EU

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member states implementing SARS-CoV-2 wastewater surveillance should adopt segmentation analysis of these ratios as standard practice, generating time-series that can inform vaccination campaign timing and healthcare capacity planning.

9.6 Workforce and Next Generation

10. **REC 10:** Formally recognise and fund One Health student organisations

One Health Students Greece — representing 5,000 students across medicine, veterinary science, pharmacy, biology, agriculture, engineering, and public health — represents the future One Health workforce. EU health and education programmes (EU4Health, Erasmus+, Horizon Europe) should specifically fund interdisciplinary One Health student training organisations, not just academic research programmes. The IDERM skin disease AI application, developed entirely by students, demonstrates that student-led innovation can produce clinically relevant tools when properly supported. Structured pathways from student projects to clinical validation should be created.

11. **REC 11:** Make AI literacy a core competency in One Health training

The rapid deployment of AI tools across medicine, veterinary science, environmental monitoring, and public health surveillance creates an urgent workforce training requirement. Every professional who will work with AI-assisted diagnostic, predictive, or decision-support systems must understand: the nature of training data and its limitations; overfitting and external validation; the difference between estimation and forecast; explainability methods; and ethical dimensions of algorithmic decision-making. WHO, ECDC, and national public health institutes should develop and offer standardised AI literacy curricula for One Health professionals at all career stages.

10. Conclusion

Day 4 demonstrated that artificial intelligence and digital innovation have moved from aspiration to application in One Health. Smartphone-based diagnostics, ML epidemic forecasting, wastewater-viral load correlation analysis, probabilistic risk assessment, adaptive neural networks for bacterial modelling, and LLM-based epidemiological data synthesis are all producing results that would have been unimaginable a decade ago.

But the conference also delivered an honest assessment of the current state: no major public health authority is yet using AI prospectively for epidemic decision support. The evidence base remains largely retrospective. Data is fragmented, heterogeneous, and geographically biased. Explainability standards are absent. Governance frameworks are nascent. The gap between what AI can do in research settings and what it does in operational practice is wide.

Closing that gap is not primarily a technical challenge. It is a governance challenge — requiring standardisation, institutional trust-building, validation frameworks, ethical oversight, and the patient work of training a new generation of professionals who are comfortable working at the intersection of data science, life science, and policy. The 5,000 students of One Health Students Greece, and the student-built IDERM skin disease AI tool, are not peripheral to this story. They are its conclusion: the future of One Health is already being built, in laboratories and student offices, by people who have never known a world where One Health was not necessary.

Sources

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This policy brief is based exclusively on the ONE-Bridge in Health Conference Day 4. Presentations referenced include: AIoT for digital health by the IoT Laboratory, University of Patras (in collaboration with Pfizer); machine learning for disease spread prediction by Universidad Carlos III de Madrid; spatial-temporal control charts by University of Patras/University of Piraeus; AI risk assessment by the University of Patras; One Health data ecosystems by University of Ioannina/Brown University; wastewater-COVID-19 segmentation analysis by EODY/University of Patras (national wastewater network); adaptive neural networks and aggregation by University of Valparaíso (Chile); AI in pathogen identification and environmental health by University of Thessaly; AI for epidemiological modelling and LLMs by Switzerland; AI in practice workshop by University of Ioannina; AI governance roundtable by University of Thessaly; and closing presentations by One Health Students Greece.

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