Enclosure AB/23/065

UKHSA Advisory Board

Title of paper   Annual Summary of Major Incident Learning
Date   Thursday 30 November 2023
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1.   Purpose of the paper:

1.1   Following the July meeting action, this paper updates the Advisory Board on the key lessons from UKHSA's incident response and the subsequent changes made in response.

2.   Recommendations

2.1   The Advisory Board is asked to:

    a.   **NOTE** the volume and breadth of captured lessons and the agency-wide changes that have occurred as a result.

    b.   **COMMENT** on the proposed next steps in section 5, for the continuous improvement of the Emergency Preparedness, Resilience and Response (EPRR) 'cycle of learning'.

3.   Overview of incidents

3.1   Lessons are captured from incident debriefs which take place in the months after incident standdown. This report covers the 4 enhanced and 14 standard incidents that were debriefed in the calendar year up to September 2023 as listed in the table in Annex A. An incident response typically involves many teams from across UKHSA, e.g., regional health protection teams, clinical and scientific experts, data specialists, policy, and communication colleagues. They are coordinated by the EPRR directorate in Health Protection Operations, which administers the cross-agency Incident Management System.

3.2   Our incident response activities in 2022/23 contributed to many successful outcomes including: between May 2022 and January 2023 Mpox cases fallen by 99%; wastewater monitoring followed by a targeted vaccine campaign resulted in no clinical reporting of polio cases; and UKHSA successfully coordinated critical health security capabilities required for the response to the Ukraine situation.

4.   Overview of lessons identified

4.1   Many aspects of our incident responses in 2022/23 worked very well. For example, we have established processes and plans that are activated at start of an incident,

and we work effectively with internal and external stakeholders. The regular All Hazards Situational Awareness weekly meetings ensure that internal and external stakeholders including the Devolved Administrations have oversight of routine to enhanced incidents and early warning of potential escalating situations such as this year's approach to winter. Of course, some aspects have worked less well and UKHSA continually gathers insights to improve its major incident response processes.

4.2   From January to September 2023, 266 major incident lessons were captured from the three main sources:

a.   **Incident Response**: 184 lessons were captured through 18 post-incident debriefs.

b.   **EPRR Deep-Dives**
  - 24 actions were identified through the Ready to Respond (R2R) Review
  - 20 lessons were identified through the incident director debrief workshop

c.   **Simulation Exercises:** 38 lessons were identified from the 2 UKHSA-only simulation exercises to stress-test the findings of the R2R Review

4.3   All 266 lessons captured have been reviewed and categorised according to strategic priority (Prepare, Respond or Build) and the level of implementation (operational, tactical, or strategic). The table below shows the number of lessons in each strategic priority, the level and timeframe for implementation:

Level & Timeframe for Implementation	Prepare			Respond			Build			Total
	Complete	In Progress	Pending	Complete	In Progress	Pending	Complete	In Progress	Pending	
Operational (up to 1 month)	12	7	12	50	30	28	1	1	1	142
Tactical (up to 3 months)	14	19	9	8	15	10	2	2	4	83
Strategic (over 6 months)	2	13	5	0	2	4	0	14	1	41
Total	28	39	26	58	47	42	3	17	6	266
	93			147			26			

Figure 1 – Summarises by category the number of lessons identified from incidents, exercises and EPRR deep-dives

- 34% have been completed (89/266)
- 39% have agreed actions in progress (103/266)
- 27% are either pending clarification, are for an external agency (such as NHS England) or have been categorised as no appropriate action (74/266)

UKHSA's new monthly ExCO report on outputs includes a key performance indicator (KPI) to track the progress of lessons. This monthly KPI report is supplemented by a quarterly report on outcomes against strategic objective 1 be ready to respond to all hazards to health.

5.   What have we learnt?

5.1   **Prepare**

 5.1.1   36% (93/266) of lessons were focused on prepare; 30% are complete, 42% in progress and 28% pending.

 Key learning completed or in progress.

 5.1.2   Examples of operational, tactical, and strategic preparedness lessons:

 a.   **UKHSA's debrief of its initial response to Ukraine identified that the alerting of Chief Medical Officer (CMO) and Department of Health and Social Care to a new incident required updating.** This change has ensured that key stakeholders such as the CMO's office are alerted as soon as a new incident is declared. This change has resulted in timely situational awareness for UKHSA's key stakeholders, which has helped to build confidence in its emerging role and responsibilities.

 b.   **The National Response Centre (NRC) Winter 2022 debrief identified the need for a more efficient approach than an incident management team (IMT) for seasonal or other planned events.** Following the organisational learning and lessons identified during winter 22/23, UKHSA has implemented a new Winter Contingency Planning Group (WCPG) for 23/24 rather than replicating structures used in 22/23. This group, chaired by the Clinical and Public Health Response Deputy Director, includes representatives from a number of key directorates across UKHSA. It meets weekly immediately following the influenza and winter surveillance meeting to review data and intelligence on the current and anticipated winter situation including potential for concurrent hazards. WCPG assesses the available information and considers the need for escalation including establishment of response structures. To complete the information sharing cycle, the team provides an update to the weekly Four Nations Health Security Situational Awareness Meeting.

 c.   **The debrief of the Winter Strategic Response Group (SRG) identified the need to ensure that SRG is provided with an agency-wide business continuity situational awareness product. This product should consider how wider winter risks (such as power, industrial action) are incorporated into the UKHSA's situational awareness, outlining a concurrency of risks and their potential impact.** This lesson is being progressed through the Ready to Respond (R2R) implementation program.

5.2   **Respond**

 5.2.1   56% (147/266) lessons were focused on response; 39% complete, 32% in progress and 29% pending.

<u>Key learning completed or in progress.</u>

5.2.2 Most response lessons involve operational and tactical aspects, examples that are in progress include:

a. **UKHSA's internal debrief of its Winter 2022 response arrangements identified that its Dynamic Risk Assessment (DRA) process for routine health security operations and incident response needed wider understanding and further dissemination.** Improvements to the DRA process has enhanced UKHSA's ability to make timely and informed decisions regarding when to activate an incident response. This includes ability to stand up at speed, a DRA virtual meeting, which is chaired by one of the cadre of trained DRA chairs and has pre-defined representation from across the agency. The DRA enables timely generation of incident notifications to enable rapid joint situational awareness.

b. **A lesson from the Ready to Respond (R2R) review identified that Incident Management Team (IMT) attendance should be reviewed and restricted to core participants.** UKHSA's Incident Response Plan (IRP) is updated on an annual basis and the current version incorporates the revision to IMT participation to include relevant Groups within UKHSA such as, Strategy, Policy and Programmes (SPP), Data, Analytics and Surveillance (DAS) and People. The updated IRP will hopefully is revision streamline decision-making and improve collaborative working, which will be assessed in future debriefs.

c. **The Avian Influenza incident identified a need for an active monitoring system that enables two-way communication with contacts and cases.** The Agency's new Modernising Interaction Management project (part of the Health Protection Operations modernisation programme) is developing a tool to support case and contact management involving human-to-human transmission. This approach will enable real-time communication (via text message and/or email) ensuring quicker identification, tracking and response to such incidents, ultimately contributing to improved public health control and containment efforts.

5.3 **Build**

5.3.1 8% (26/266) lessons focused on build; 12% complete, 65% in progress and 23% pending.

<u>Key learning completed or in progress.</u>

5.3.2 Examples of strategic build lessons include:

a. **The COVID Contingencies for UK arrivals from China identified the need to agree ways of working and operational approach for large scale testing at ports of entry as part of UKHSA's COVID-19 contingency plan.** This is an example of a strategic response lesson that

is currently being developed. Testing at the border is a core proposal of the Border Health Transformation Programme which is in development for consideration in early 2024.

b. **The Avian Flu simulation exercise identified that UKHSA requires a rapid confirmatory and sequencing pathway for the testing of avian influenza in humans.** This has been addressed through the work of the Science and Clinical Public Health Groups to enhance pathways for the testing of avian influenza in humans.

6. EPRR Cycle of Learning

6.1 UKHSA's EPRR learning process is still in development and is a business plan objective for this financial year under strategic priority one (be ready to respond to all hazards to health). Our objective is to implement a systematic cycle of learning; this is described in the draft EPRR concept of operations document and Incident Response Plan, and can be summarised as:

a. **Capture** - Lessons come from various sources including debriefs in the recovery phase of standard and enhanced incidents, simulation exercises, EPRR deep-dives, the annual EPRR assurance process, the Cabinet Office Joint Operational Learning for Category 1 Responders, the cross-government Learning Digest, and World Health Organisation's EPRR guidance.

b. **Assess** - Lessons are reviewed by a working group within the EPRR Delivery Group, chaired by the Deputy Director Preparedness, to ensure accuracy and understanding. They are categorised based on UKHSA's goals of Prepare, Respond, and Build and classified as operational (to be implemented within 1 month), tactical (within 3 months), or strategic (6 months or longer).

c. **Action Planning** - The lessons working group creates action plans and oversees implementation of operational and tactical lessons. Complex tactical and strategic lessons will be reviewed by the EPRR Delivery Group and bi-annually, learning updates will be taken to EPRR Oversight Group.

d. **Implementing Lessons** – In addition to the continuous improvement of UKHSA's preparedness and response plans to embed the learning from lessons, planning teams for simulation exercises receive relevant lessons to incorporate into objective setting and the evaluation strategy. To ensure lessons are embedded during incidents, the Incident Director reviews the lessons from previous incidents at the beginning of each response.

6.2 The Preparedness Division within EPRR has recently appointed to a new Quality, Standards, and Improvement (QSI) team. The QSI team will focus on continuous improvement and will provide the capacity to accelerate the lessons process, provide improved action tracking, and in-depth analysis of trends and common themes. This new team will include lessons identified from UKHSA's regional health protection and national subject matter teams, addressing roughly 10,000 routine incidents annually.

7.   COVID-19 Lessons Update

7.1   As set out in the July paper, the Centre for Pandemic Preparedness (CPP) has established a repository from 200+ sources across UKHSA, its predecessors and the wider health family. This is being used to inform our new pandemic preparedness programme, to highlight future research and evaluation needs, and to respond to the COVID-19 Inquiry. Alongside this, the CPP is developing a process to give UKHSA assurance that actions or further research are undertaken for the lessons being identified and these are being monitored so that they can be described as lessons learned.

7.2   As part of this assurance model (Annex B), CPP has organised these lessons into themes, developed narrative statements of lessons identified from the repository and mapped these onto each CPP programmes or to other cross-cutting themes. Lessons that are either overlapping or out of scope for the portfolio are being highlighted with relevant teams including EPRR, Strategy and Health Equity.

7.3   Following the collation of lessons, CPP is using an assessment and triage process by working with subject matter experts in UKHSA to validate and agree owners for improvement actions (actionable learning) and agree research needs. As far as possible, owners for these actionable learnings will be assigned through the pandemic preparedness portfolio, which will report to UKHSA's Pandemic Preparedness Oversight Board (PPOB). Where actions are not obvious and immediate, CPP will consider longer term recommendations that can be taken forward for further analysis. This may require teams to carry out further appraisals, such as assessments on cost effectiveness to determine long-term actions for policy development. This process has been implemented as a pilot on the Diagnostic and Testing workstream which identified several key actions and research needs which will now be taken forward CPP are evaluating these findings and intend to implement this assurance model on further workstreams. CPP has also scanned across the lessons repository to identify health equity issues as a cross-cutting theme and provided an analysis to help advance UKHSA's goal to achieving more equitable outcomes.

7.4   A detailed update on COVID-19 lessons will be provided to the Advisory Board in January 2024

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November 2023

Annex A – Table listing the Enhanced and Standard Incidents included in the report

Incident	Debrief date	Response Level	Date Incident Declared	Date Incident Closed	Included in Report
NICC67: Burkholderia Stabilis	01/01/2023	Standard	05/05/2022	01/06/2022	Y
NICC85: Network Connectivity and Power Down at Porton Site	09/01/2023	Standard	21/12/2022	22/12/2022	Y
NICC86: COVID Contingencies	19/01/2023	Standard	03/01/2023	24/02/2023	Y
NICC59: Ukraine	24/01/2023	Enhanced	24/02/2022	11/01/2023	Y
NICC79: Ebola in Uganda	03/02/2023	Standard	05/10/2022	14/12/2022	Y
NRC Winter 2022	06/03/2023	Enhanced	10/07/2022	31/03/2023	Y
NICC68: Monkeypox	15/03/2023	Enhanced	06/05/2022	25/01/2023	Y
NICC82: Influenza A (H1N1) Detection Issues	09/05/2023	Standard	16/11/2022	03/08/2023	Y
NICC61: Listeria Monocytogenes CC217 (t10:12)	12/05/2023	Standard	28/01/2022	14/03/2022	Y
NICC58: Tuberculosis exposure in Transplant Organs	30/05/2023	Standard	21/02/2022	25/02/2022	Y
NICC74 & 80: Avian Influenza 2022/23	16/06/2023	Standard	10/10/2022	02/03/2023	Y
NICC69: Mycobacterium Chelonae Endocarditis	05/07/2023	Standard	12/05/2022	05/09/2022	Y
NRC001: Sudan Repatriations	24/07/2023	Standard	25/04/2023	03/05/2023	Y
NRC007: STEC Associated with Farm Attraction	30/08/2023	Standard	27/07/2023	04/08/2023	Y
NRC008: Colindale IT server failure impacting MOLIS	01/09/2023	Standard	28/07/2023	18/08/2023	Y
NRC009: Southwest Legionella 2023 (Bibby Stockholm)	06/09/2023	Enhanced	11/08/2023	23/08/2023	Y
NRC004: Indigo Bear	18/09/2023	Standard	07/07/2023	01/09/2023	Y
NICC87: Pseudomonas Aeruginosa Outbreak	20/09/2023	Standard	16/01/2023	26/06/2023	Y

Response descriptions have been extracted from UKHSA's Incident Response Plan and are therefore in italics:

Routine response - manageable within normal operational capacity and capability for both health and business continuity incidents.
Standard response - require co-ordination and/or resources over those provided by normal operational capacity and capability. They are managed by an Incident Management Team and led by an Incident Director. The National Response Centre (NRC) co-ordinates the delivery and document management of the response and provides regular updates to All Hazards Situational Awareness (AHSA).
Enhanced response - will have a Strategic Response Director (SRD) supported by a Strategic Response Group. The Incident Director remains in charge of the tactical and operational aspects of the response and reports to the SRD who leads the strategic aspects. The NRC co-ordinates the delivery and document management of the response and provides regular updates to AHSA.

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Annex B – Assurance Model

1.Identify
Sources of lessons

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2. Input
Lessons from sources into UKHSA central repository

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3. Collation of lessons
Narrative summaries shared with PPP workstreams to help support development of objectives

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4. Assess and Triage
Work with programme leads to sense check lessons identified and prioritise lessons

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5. Develop improvement actions for priority lessons

5(i).
Determine long term actions for further policy development

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6. Output
Set of improvement actions for each workstream used to inform PPP deliverables and added to central tracker tool

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7. Assurance
Monitor actions via established reporting and governance forums