FINAL REPORT ON

EXERCISE GOLIATH

An exercise held to test the response of the health community in the event of a SARS (Severe Acute Respiratory Syndrome) outbreak in Northern Ireland

Tuesday 9th December 2003
Ramada Hotel Belfast

INTRODUCTION

On 9th December 2003, the Department of Health, Social Services and Public Safety (DHSSPS) and the Health Protection Agency (HPA) held a one-day exercise (codenamed *Goliath*) to explore the Interim Northern Ireland Contingency Plan for Severe Acute Respiratory Syndrome (SARS), in order to identify the potential for improvements/amendments.

OBJECTIVES

The objectives of the exercise were as follows:

1. To explore the capabilities of local healthcare systems in coping with an increasing number of SARS cases, namely;

    - to explore control of infection guidelines, including isolation procedures and communication protocols
    - to explore contact tracing arrangements and co-ordination of data communication
    - to explore employee relations and human resource issues

2. To identify resource requirements

    - to identify support functions that will be required, their implementation and delivery

3. To review command and control structures, including an understanding of roles and responsibilities

4. To assess regional support to a local event

5. To explore the resources of SARS control teams and other players to deal with requests for information from the media

6. To explore interagency communications

    - to explore communications and links with DOHC, Dublin
    - to explore inter-Trust co-operation and communication

PARTICIPANTS

Six syndicates participated in the exercise, representing two of the 'SARS-designated' hospitals, their respective Health Boards and two groupings within the DHSSPS outbreak management structure:

- Royal Hospitals Trust/ North West Belfast Community Trust/Northern Ireland Ambulance Service
- United Hospitals Trust/ Homefirst Trust/ Northern Ireland Ambulance Service
- Eastern Health and Social Services Board
- Northern Health and Social Services Board/ Northern Group Environmental Health
- Regional Outbreak Control Committee (ROCC)
- Regional Health Command Centre (RHCC)

In addition, three other groups participated during the exercise:

- Observers (including other Boards, Trusts, Government Departments and jurisdictions)

- 'the Media' (an experienced former journalist currently working as a Information Officer for the Department of Education)

- Exercise Control

EVALUATION PROCESS

Evaluation of the exercise is based on the following outputs:

- *Exercise action reports* – syndicates were tasked to provide written responses to all injects provided (by whatever means) during the exercise.

- *Recorder feedback* – each syndicate was observed during the course of play by a *Recorder*, an individual specifically tasked to provide written feedback of syndicate progress – and in particular difficulties/omissions in the NI Contingency Plan.

- *Rapporteur feedback* – each syndicate *Rapporteur* provided a brief verbal feedback in the end of exercise wash-up session. This was limited to three positive and three negative experiences of the day.

- *Participant-completed evaluation forms*

SUMMARY

The exercise provided a valuable opportunity to explore the Interim NI Contingency Plan for SARS. The exercise development process itself benefited from, and added to, experience gained through Exercise Shipshape, a SARS exercise run by the HPA for the Health Service in England.

Positive points

While the emphasis of this report is on the lessons learnt, there were also several positive points:

1. All syndicates had good awareness of the Interim Northern Ireland Contingency Plan for SARS. It was generally agreed that the Plan provided a sound framework on which to base an outbreak response.

2. All syndicates identified learning points.

3. Syndicates benefited from the opportunity to work across disciplines and agencies, not encountered in routine working.

4. Exercise participants showed great energy and commitment. This drew favourable comment from both observers and HPA exercise control staff. In turn, 95% of participants who commented agreed or strongly agreed that the exercise met their expectations for the day.

Lessons learnt

The lessons learnt are as detailed below. Where possible, recommendations for action have been made.

1. *Roles and responsibilities*

The exercise identified issues around the roles and responsibilities of the various syndicates, in particular those of the new groups, ROCC and RHCC. Contact tracing and the process for decanting patients were noticeably affected. While this could be improved through greater awareness of the Interim Contingency Plan, there is also a need to consider streamlining the proposed command and control structures.

Action: Regional SARS Taskforce/All syndicates

Individual role designation within the syndicates was also not clear at times, and could be improved through the use of pre-prepared syndicate plans and action cards.

Action: All syndicates

2. Consultant in Communicable Disease Control (CCDC) expertise

The exercise identified the likely pressure on CCDC resources during a SARS outbreak, and the need for CCDC expertise surge capacity. This would benefit from the proposed review of the command and control structures (see '*1. Roles and responsibilities'* above); and a review of the roles and responsibilities within Board outbreak control teams.

Action: Regional SARS Taskforce/Boards

3. Communication

74% of participants who commented, identified a need to improve communication between the different syndicates. At times, untimely communication and lack of awareness of communication channels as detailed in the Plan led to communication weaknesses, unnecessary duplication of effort, and to some decisions being taken outside the designated command and control structure. There were examples throughout the day of all syndicates being affected.

The NI Contingency Plan should contain a simple one-page flow chart-type summary of the communication channels involving Trusts, Boards and the Regional tier, including CDSC (NI). All syndicate plans should include a clear summary, appropriate to themselves, of the communication channel details contained in the NI Contingency Plan.

Action: Regional SARS Taskforce/ All syndicates

4. Dealing with the media

Syndicate spokespersons performed well, and responses were well co-ordinated centrally. The need to be pro-active in communicating positive health messages and to provide a faster overall response to media enquiries was identified.

Action: Regional SARS Taskforce/All syndicates

5. Contact tracing

Contact tracing during an actual outbreak is likely to involve considerable resources. Where not already done so, operational contact tracing mechanisms with the potential for *scaling up* need to be developed at Board and Trust level.

Action: Boards/Trusts

6. Designated hospitals

Although unable to be explored within the constraints of the day, the exercise also identified issues around the proposed patient flow pathway and the process for designating hospitals as SARS facilities. Questions arose over the designated facility's negative pressure room capacity. When this is exceeded (as happened at the end of the exercise) should an additional facility (Mater Hospital) be designated, or should the first facility proceed to use its single (normal pressure) rooms? Should cohorting-type arrangements on the same site be used if yet further capacity is required? Although to some extent this will depend on the scenario in force, principles should be established in order that affected Trusts might plan appropriately. There is a need to involve Emergency Admissions Co-ordinating Centre (EACC) in further planning (see also *7. decanting plan*).

Action: Regional SARS Taskforce

7. Decanting plan

The exercise also highlighted the need to clarify the process for decanting non - SARS patients (particularly ICU activity) from a SARS - affected hospital. Designation of a particular hospital would result in the need to decant relatively large numbers of patients within short timescales to other acute hospitals or to nursing homes. Plans should specify who, where and how to decant, and at what trigger level of SARS activity this should occur. Responsibility and authority for the different stages of the process should be assigned. The role of EACC should be defined.

Action: Regional SARS Taskforce

8. Case definition

Use of the different case definitions was inconsistent both across and within syndicates. Greater emphasis should be placed on a consistent useage.

Action: All syndicates

9. Use of Agency Staff

A policy should be developed on the deployment of Nursing Agency Staff in the event of a SARS outbreak. Issues covered should include movement of staff between different sites and staff contact tracing. Responsibility and the necessary authority should be clearly defined.

Action: Regional SARS Taskforce

10. Outbreak control management

Although not all points were applicable to all syndicates on the day, it was felt that the outbreak management process would benefit from:

- A pre-planned outbreak control team meeting agenda
- Documentation (including a timeline) for action taken and a description of the decision making process
- Role-specific action cards

Action: All syndicates

11. Assessment centres

Guidance needs to be developed on the setting up of assessment/screening centres.

Action: Regional SARS Taskforce

The remainder of the report provides detailed feedback from:

- Syndicate rapporteurs as **APPENDIX 1**
- Observer report forms as **APPENDIX 2**

APPENDIX 3 contains a list of the exercise participants.

APPENDIX 1

RAPPORTEUR FEEDBACK

NHSSB

Good points:

- Contingency plan in place
- Learning points for the Board were identified

Bad points:

- CCDC often absent from the team due to other commitments
- Loosely defined communication channels, especially those involving ROCC/RHCC
- Need policies to cover decanting and cohorting of patients

UHT

Good points:

- Gaps were identified
- Beneficial meetings with the CCDC – valuable contributions

Bad points:

- Communication problems
- Incomplete and untimely information from ROCC/RHCC
- Rumours able to spread in absence of information
- Decanting process would have been difficult in reality
- Need a regional decanting plan with a centralised mechanism for ICU patients
- There needs to be a regional plan in terms of the sequence of designating SARS facilities. Is another facility designated when all negative pressure rooms are used, or does the first use normal pressure isolation rooms and cohorting facilities?
- Possibly should have a single spokesperson for media

RGHT

Good points:

- Timeline (software support)
- NI plan worked well
- RGHT plan also worked well – particularly splitting into smaller work teams
- Good communication (but interagency working)

Bad points:

- Need to balance media needs with expert needs
- Need to be clear on case definitions to be used and then stick to these definitions
- Thought exercise process could be more iterative with syndicates drafting their own case histories
- There needs to be a policy on the use of Nursing Agency staff in a SARS outbreak, possibly dedicating staff to the affected facility.
- RVH had taken the decision to reduce routine admissions, before a decision was made by RHCC

EHSSB

Good points:

- Learnt from a new situation working with different team members
- Number of gaps identified for the Board to work on for its preparedness
- NI contingency plan useful framework

Bad points:

- More proactivity with the media was needed across all organisations. There may be benefit in having one media spokesperson to act on behalf of all organisations
- CCDC often unavailable

ROCC

Good points:

- Positive experience (worked well together)
- Excellent timelog kept
- A verbal checklist was developed to "take stock" with RHCC at level 3B

Bad points:

- Role of members and division of labour unclear – should have pre planned agenda for meetings and clear thoughts on roles and responsibilities
- Additional support resources would be required
- Inputs from others lacked epidemiological information – had to spend a lot of time seeking information from Boards and Trusts
- No information being passed to CDSC
- Communication issues
- Interface with RHCC unclear
- Needed to have an information team – talked about forming one but didn't

RHCC

Good points:

- Media handling went well

Bad points:

- Regular updates required
- Planning needed to clarify:
  - Appropriate documentation formats for decisions
  - Identified roles/action cards
  - Decision for level of alert
  - Outbreak control and service control work at regional level

Observer group

Good points:

- Good preparation
- Good basis from yesterday's workshop
- Awareness of plan was good
- Effective multidisciplinary working
- More work port health staff

Bad points:

- Communication
- Lack of cohesiveness with some groups being large and dysfunctional
- Suggestion that exercise injects could be more systematic with timeline and updating of cases
- Lack of clarity of channels of communication (ROCC and trusts, and between Boards and CDSC (NI)
- Role definition – lack of specificity
- Epilink information – people unwilling to pass on information unless sure
- CDSC not contacting Colindale
- Contact tracing needs big resource and surge capacity
- PPE not distributed according to plan
- There was a lack of CCDC capacity

Media handling

- Strategy should be an integral part of process – not bolt-on
- Co-ordination centrally was good
- CMO visibility and performance good
- All media participants comfortable on camera

- Downside of central co-ordination strategy is that it must work fast
- RVH criticism was left unanswered for a long time
- Another very critical broadcast had been prepared because of no response from RVH
- Perceived splits about the decanting issue
- Tone should leave the door open for the worst case scenario and don't know all the answers – not complacency
- Even though cases not confirmed will still be of interest to the media – media interest created by the increased activity and also by the SARS contingency plan being invoked

CDSC

- No information coming from Trusts/Boards
- Information on the first case came form Colindale!

EXCON

- Need to develop artificial contacts database
- Facilitating 2 groups (ROCC/RHCC) was difficult
- Surprising that ROCC/RHCC remained separate
- Central white board to update exercise progress
- Media was a frequent source of distraction
- Interviews too long – line of questioning may be tougher in a real-life scenario
- Need for someone to manage and co-ordinate the media response in a group

APPENDIX 2

OBSERVER REPORTS (10)

How would the scenario affect your organisation?

- It would place a strain on Council staff resources. Staff would have to be taken from core functions e.g. imported food control/food inspections. We would need to use all EHO staff in a major outbreak, not just those dealing with ID/food. Agreement in advance should be obtained from Council CEX/ Director Environmental Health for use of EHO staff.
- Need for cases to be reported nationally. Would be need to provide guidance on cased definitions/clinical issues/infection control/contact tracing etc
- Ensure regular (?frequency) briefings – even if there's no news to tell.
- At one point in time in March/April the WHO website had over 50,000 hits a day and over 3000 media reports on SARS. The need to find evidence-based information was tremendous and the need for additional personnel and expertise could not be met immediately. Scaling up is also important for WHO including for local response teams
- Community surge capacity would be needed
- Only on the periphery but our (Vet service, DARDNI) Imports Inspectors are responsible for portal checks (2 harbours & 2 airports) on incoming passengers and illegal importation of meat. Significant quantities of "bush meat" are seized every year, much of it from China, Hong Kong, Vietnam and Singapore. There is a high risk of such meat being infected

Was the scenario realistic?

- Yes/Yes/Yes/Yes/Yes/No/Yes
- Would have liked it to go on a while longer – many questions left unanswered.
- Rumours and genuine cases mixed together.
- In terms of mounting media pressure actually got off quite lightly! What about when there's more journalists and cameras, and demands for interviews? The misinformation passing from journalists to Trusts was useful – important to clarify information among agencies.
- Media input worked well.
- No - In a live situation it is impossible to assemble so many experts at one time. Timescales are unrealistic for the exercise.
- As good as you can get in this artificial situation

Have you learned anything from the exercise?

- Yes/Yes/Yes/Yes/Yes
- There would need to be information passed down form Boards to District Council Senior Management who would brief staff on overall view of SARS and what would be expected of them. Would need procedure notes for staff to use. Need to improve communications between Board and EHOs
- Communication channels (including to CDSC) were not always clear; public health not included early enough. Very little communication with CDSC.
- Have a media strategy – key spokesperson identified and ready to do media interviews. Have information flowing around Trusts, NHS figures etc. Be confident with media – may appear have something to hide otherwise
- Very useful exercise which could be broadened to other diseases and initiating as an unknown disease (e.g. VHF, new flu strain)
- Importance of communication
- Address issue of contact follow-up – firm up advice on what exactly is meant by a contact.
- Communication – when receiving information ensure that the information is as complete as possible
- Absolute need for clear, concise communication
- Clarification of roles via the SARS plan (does the plan need a summary)
- Need for clear media strategy
- Clarity of roles
- Need for involvement of school health
- Number of issues which need to be considered from a strategic health perspective rather than in individual Trusts
- The entire episode highlighted communication issues. Internal from the Department to Boards to Trusts to Hospitals to GPs on the ground. There is a real need for standard SITREP reports to be used (we used them in foot and mouth). External – personnel were driven by the media rather than go with a message "what are symptoms – where do you go" etc. How high is the risk. What do they do to protect themselves? Senior staff should not use jargon e.g. A&E, electives, isolation, suspects, positives etc.

What recommendations would you make for improving the response to SARS at the following levels?

National

- Classification of cases – needs greater early contact with public health/CDSC/WHO input

- Beware of going outside command and control chain. Didn't seem to be enough co-ordination of surveillance/epidemiological data. Sort a solid plan for isolation facilities.
- Updated resource availability and links with other EC countries

Regional

- Look at interagency communications
- Clear roles and communication
- Little discussion heard on primary prevention to avoid further spread, importations, future scaling up if hundreds of cases appeared – in terms of PPE, treatment, cohorting, extra hospital staff. Perhaps from the start a scaling up response co-ordination should be envisioned
- Didn't use standardised form to collect data and hence frequent returns to get more data
- Better chairing of ROCC – one person in total control of committee
- Communication to all the relevant partners in NHS needs re-examination
- Need to understand roles of ROCC/RHCC
- Streamline organisation of Health Control. Have flow charts devised of contingency response and publish these. Revise SITREP reports and issue these to relevant centres, outlining info required each day and when

Local

- Staff training must be ongoing
- Keep outbreak control team focused and use subgroups. Great confusion about ventilators and ventilated rooms (ie negative pressure rooms)
- Hospitals need to understand structure of public health levels
- Proper history taking
- Define arrangements in place for contact tracing
- Ensure IT and communication links are working
- Review local arrangements. If local case, would you close hospital and where would patient be referred to (hospital). Would they go to GP or hospital if suspicious symptoms

APPENDIX 3

EXERCISE GOLIATH PARTICIPANTS

NHSSB Syndicate

Dr	Tracey	Cruickshanks	Whitehouse Medical Group Practice
Dr	Michael	Devine	Northern Health & Social Services Board
Ms	Patricia	Allen	Northern Group Systems
Prof	John	Watson	Northern Health & Social Services Board
Dr	Carolyn	Harper	Northern Health & Social Services Board
Mr	Seamus	Logan	Northern Health & Social Services Board
Mr	David	Johnston	Northern Health & Social Services Board
Mrs	Molly	Kane	Northern Health & Social Services Board
Dr	Gerry	Waldron	Northern Health & Social Services Board

EHSSB Syndicate

Mr	Stephen	Adams	Eastern Health & Social Services Board
Dr	Carol	Beattie	Eastern Health & Social Services Board
Dr	Catherine	Booth	Eastern Health & Social Services Board
Dr	Bernadette	Cullen	Eastern Health & Social Services Board
Dr	Philip	Donaghy	Eastern Health & Social Services Board
Dr	Anne	Wilson	Eastern Health & Social Services Board
Mrs	Mary	Waddell	Eastern Health & Social Services Board

United Hospitals Syndicate

Mrs	Hazel	Baird	Homefirst Community Trust
Dr	Wendy	Anderson	United Hospitals Trust
Mr	Will	Campbell	United Hospitals Trust
Dr	Andrew	Ferguson	United Hospitals Trust
Sr	Linda	Gamble	United Hospitals Trust
Mrs	Ann	Gardiner	United Hospitals Trust
Mr	Don	Heaney	United Hospitals Trust
Dr	Paddy	Kearney	United Hospitals Trust
Mrs	Linda	Teuton	United Hospitals Trust
Mr	Raymond	Scullion	United Hospitals Trust
Miss	Alice	McParland	United Hospitals Trust
Mrs	Sara	Smyth	United Hospitals Trust
Mr	Adrian	McAuley	Northern Ireland Ambulance Service

Royal Hospitals Syndicate

Mrs	Sharon	Barr	North & West Belfast Community Trust
Mr	Hugh	McCaughey	Royal Group Hospitals Trust
Ms	Sharon	Dunn	Royal Group Hospitals Trust
Ms	Sara	Carroll	Royal Group Hospitals Trust
Dr	Peter	Coyle	Royal Group Hospitals Trust
Mrs	Dympna	Curley	Royal Group Hospitals Trust
Mrs	Mary	Diamond	North & West Belfast Community Trust
Dr	David	Gilmore	Royal Group Hospitals Trust
Dr	Sara	Hedderwick	Royal Group Hospitals Trust
Mrs	Valerie	Jackson	Royal Group Hospitals Trust
Dr	Paul	Jackson	Royal Group Hospitals Trust
Mr	Nigel	Keery	Royal Group Hospitals Trust
Dr	Gavin	Lavery	Royal Group Hospitals Trust
Mrs	Marie	Mallon	Royal Group Hospitals Trust
Dr	Michael	McBride	Royal Group Hospitals Trust
Mrs	Lynda	McBride	Royal Group Hospitals Trust
Mr	Larry	O'Neill	Northern Ireland Ambulance Service
Dr	Laurence	Rocke	Royal Group Hospitals Trust
Dr	Ed	Smyth	Royal Group Hospitals Trust
Dr	Tony	Stevens	Royal Group Hospitals Trust
Miss	Irene	Thompson	Royal Group Hospitals Trust

RHCC/ROCC Syndicates

Dr	Etta	Campbell	Department of Health, Social Services & Public Safety
Miss	Christine	Campbell	Department of Health, Social Services & Public Safety
Dr	Lorraine	Doherty	Department of Health, Social Services & Public Safety
Mr	Gerry	Dorrian	Department of Health, Social Services & Public Safety
Miss	Judith	Hill	Department of Health, Social Services & Public Safety
Dr	Carolyn	Mason	Department of Health, Social Services & Public Safety
Mrs	Liz	Qua	Department of Health, Social Services & Public Safety
Dr	Jim	Livingstone	Department of Health, Social Services & Public Safety
Dr	David	McManus	Northern Ireland Ambulance Service
Dr	Liz	Mitchell	Department of Health, Social Services & Public Safety
Mr	Kevin	Mulhearn	Department of Health, Social Services & Public Safety
Super	Gary	White	Police Service of Northern Ireland
Dr	Joe	Kidney	Mater Informorum
Mrs	Mary	McElroy	Mater Informorum
Dr	Brian	Smyth	Communicable Disease Surveillance Centre (Northern Ireland)
Mr	Noel	McCann	Department of Health, Social Services & Public Safety
Dr	Tim	Wyatt	Mater Informorum

Observers

Dr	Stephen	Bergin	Southern Health & Social Services Board
Dr	Graham	Bickler	Department of Health
Mr	Mark	Bothwell	Belfast International Airport
Mrs	Pat	Brown	Foyle Community Trust
Mrs	Stella	Burnside	Altnagelvin Hospital
Dr	Naresh	Chada	Department of Health, Social Services & Public Safety
Mr	Alan	Charles	Department of Health, Social Services & Public Safety
Dr	Martin	Donaghy	Scottish Centre for Infection & Environmental Health
Dr	Bernardus	Ganter	World Health Organisation
Ms	**Name Redacted**		Health Protection Agency
Mr	Richard	Grace	Central Emergency Planning Unit
Ms	**Name Redacted**		Health Protection Agency
Mr	Ian	Kerr	Northern Ireland Office
Mrs	Mary	Loughrey	Western Health & Social Services Board
Mr	Brendan	McCartan	Department of Agriculture & Rural Development
Ms	Denise	McDonagh	Craigavon & Banbridge Community Trust
Dr	Dorina	O'Flanaghan	National Disease Surveillance Centre
Dr	Richard	Smithson	Western Health & Social Services Board
Dr	Vinod	Tohani	Southern Health & Social Services Board
Dr	Valerie	Delpech	Health Protection Agency
Mrs	Janet	Johnston	
Dr	Chris	Armstrong	Craigavon Area Hospital

Exercise Control (EXCON)

Mr	Mark	Anderson	Department of Health, Social Services & Public Safety
Dr	**Name Redacted**		Health Protection Agency
Mrs	Monica	Graham	Eastern Health & Social Services Board
Ms	Louise	Hagan	Eastern Health & Social Services Board
Dr	Neil	Irvine	Eastern Health & Social Services Board
Dr	Angela	Jordan	Eastern Health & Social Services Board
Mr	Laurence	Knight	Health Protection Agency
Dr	Anne	Loughrey	Belfast City Hospital
Mr	Neil	Magowan	Department of Health, Social Services & Public Safety
Mr	Brian	Mallaghan	Eastern Health & Social Services Board
Dr	John	Martin	Down and Lisburn Trust
Mr	Tommy	McAuley	Department of Health, Social Services & Public Safety
Dr	William	Munroe	Eastern Health & Social Services Board
Mr	Billy	Newton	Northern Ireland Ambulance Service
Dr	Elizabeth	Reaney	Southern Health & Social Services Board
Dr	John	Simpson	Health Protection Agency
Mr	Chris	Tiernan	Department of Health, Social Services & Public Safety
Mrs	**Name Redacted**		Health Protection Agency
Ms	Aine	Gaughran	Department of Education
Mr	John	Morrison	A/V Support
Dr	Paul	Darragh	Eastern Health & Social Services Board