



Microbiology Division

National Microbiology Surveillance Unit

BACKGROUND

The National Microbiology Surveillance Unit (NMSU) aims to contribute to the control of bacterial and fungal diseases, determined to be of public health importance in South Africa, through the development and coordination of laboratory-based surveillance systems which provide strategic information for public health action. The objectives of the NMSU are to (1) coordinate, direct and provide capacity for the activities of the well-established GERMS-SA surveillance programme and (2) coordinate and/or provide capacity for collaborative research studies to assist in the understanding of research questions arising from surveillance projects.



NMSU surveillance site visit to Eastern Cape NHLS laboratories (accompanied by SA-FELTP residents)

ACTIVITIES, HIGHLIGHTS AND ACHIEVEMENTS

GERMS-SA SURVEILLANCE PROGRAMME

GERMS-SA is a national laboratory-based surveillance programme for bacterial and fungal diseases of public health importance. More than 15,000 laboratory-confirmed cases are reported through this system annually. The NMSU directs and coordinates the surveillance programme in collaboration with other units within the Microbiology Division of the NICD: Enteric Diseases Reference Unit (EDRU), Mycology Reference Unit (MRU), Parasitology Reference Unit (PRU) and Respiratory and Meningeal Pathogens Reference Unit (RMPRU). A full description of surveillance activities of the GERMS-SA programme is contained within the Annual Report 2007. The "GERMS-SA brand" was developed by creation of a logo, distribution of branded brochures to laboratories to encourage participation and by upgrading the GERMS-SA website (accessed through the NICD website, www.nicd.ac.za).

GERMS-SA SURVEILLANCE SITE VISITS

In 2007, surveillance site visits to 40 laboratories in 8 provinces provided an opportunity for NICD/ GERMS-SA staff to engage with laboratory and hospital staff participating in the surveillance programme (Table 1).

GERMS-SA COORDINATION MEETINGS

The NMSU coordinated the GERMS-SA surveillance programme by convening the following meetings involving local and international collaborators:

- Surveillance Officer meeting, 8-9 March 2007
- Surveillance Officer meeting, 21-22 November 2007
- Principal Investigator meeting, 10-11 October 2007
- Steering Committee meeting, 11 October 2007

GERMS-SA PUBLICATIONS

The NMSU compiles and distributes regular surveillance publications to the participating laboratory network and other stakeholders.

- Annual Report 2006
- Quarterly Laboratory Reports: Q1-2007, Q2-2007, Q3-2007, Q4-2007
- Enhanced Surveillance Site Operational Reports 2006
- Link Newsletter: Volume 17 (April 2007), Volume 18 (July 2007), Volume 19 (December 2007)

Table 1: GERMS-SA surveillance site visits, 2007

Date	Province	Laboratory	Hospital
3-4 May 2007	Eastern Cape	NHLS Mthatha	Nelson Mandela Academic Hospital Complex
		NHLS Butterworth	Butterworth Hospital
		NHLS East London	Frere Hospital
		NHLS Cecilia Makiwane	Cecilia Makiwane Hospital
12-13 July 2007	Eastern Cape	NHLS Port Elizabeth Pathcare PE	NHLS Port Elizabeth
		NHLS Grahamstown	Settlers Hospital
		NHLS Uitenhage	Uitenhage Hospital
18-19 April 2007	Free State	NHLS Manapo NHLS Bethlehem	Manapo Hospital Bethlehem Hospital
31 January 2007	Gauteng	NHLS Helen Joseph	Helen Joseph Hospital
15 March 2007	Gauteng	Ampath Pretoria Lancet Pretoria	- -
25 April 2007	Gauteng	Ampath Metalbox	-
13 September 2007	Gauteng	NHLS DGM	Dr George Mukhari Hospital
19 September 2007	Gauteng	NHLS CHBH	Chris Hani Baragwanath Hospital
19 September 2007	Gauteng	NHLS Sebokeng	Sebokeng Hospital
4 October 2007	Gauteng	NHLS JHB	Johannesburg Hospital
19 - 20 April 2007	KwaZulu Natal	NHLS IALCH	King Edward VII Hospital
		NHLS Addington/RK Khan	Addington Hospital/RK Khan Hospital
		NHLS PMMH	Prince Mshiyeni Hospital
		NHLS Pietemaritzburg	Greys/ Edendale/Northdale Hospitals
23-24 July 2007	KwaZulu Natal	NHLS GJ Crookes	GJ Crookes Hospital
		NHLS Port Shepstone	Port Shepstone Hospital
28 September 2007	Mpumalanga	NHLS Witbank NHLS Middleburg	Witbank Hospital Middleburg Hospital
15-16 August 2007	Northern Cape	NHLS Upington	Gordonia Hospital
		Ampath Upington	-
		NHLS Springbok	Springbok Hospital
6-7 December 2007	North West Province	NHLS Gelukspan	Gelukspan Hospital
		NHLS Thusong	Thusong Hospital
		NHLS Lehurutshe	Lehurutshe Hospital
		NHLS Mafikeng	Bophelong Hospital
14-18 May 2007	Western Cape	NHLS Paarl	Paarl Hospital
		NHLS Worcester	Eben Donges Hospital
		Pathcare Cape Town	-
		NHLS Tygerberg	Tygerberg Hospital
		NHLS Greenpoint	-
26 July 2007	Western Cape	NHLS George Pathcare George	George Hospital -

RESEARCH PROJECTS

The NMSU collaborated with other NICD units on the following projects during 2007:

- The impact of HIV on clinical and microbiologic features and mortality among patients with non-typhoidal *Salmonella* infection in South Africa
- Differences in blood culturing practices in rural and urban areas of South Africa
- Collection rates for blood culture and cerebrospinal fluid specimens and estimated burden of disease due to invasive respiratory, meningeal and enteric bacterial pathogens in South Africa
- Epidemiology of invasive pneumococcal disease in patients ≥ 65 years of age, South Africa, 2005 and 2006.
- Paediatric cryptococcosis in South Africa, 2005-2007: a comparison with adult cryptococcal disease

- Emergence of levofloxacin-non-susceptible pneumococci in children associated with treatment for multidrug resistant tuberculosis in South Africa

CAPACITY BUILDING

Dr Susan Meiring was awarded the Diploma in Tropical Medicine and Hygiene (DTM&H) with distinction, University of the Witwatersrand

SA-FELTP Field Block, 19 March - 1 May 2007: Two SA-FELTP residents, Sister Lulu Khumalo and Sister Phumzile Zondo were hosted by the NMSU during this block and each completed an evaluation of the components of the GERMS-SA surveillance programme.