An outbreak of multidrug resistant organisms in a neonatal intensive care unit in Malaysia.

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Introduction:

Managing infections caused by multi-drug resistant organisms (MDROs) in the neonatal intensive care (NICU) is challenging.

During January–February 2017, MDROs increased, especially extreme drug resistant *Acinetobacter baumanii* (XDR-AB) which was isolated from infants in a 25-bed level III tertiary NICU.

An investigation to contain the outbreak was performed.

Methods:

Surveillance of clinical isolates, contact screening & environmental swabs were carried out.

XDR-AB was defined as *Acinetobacter baumanii* resistant to all antibiotics except colistin

A review of protocols and direct observation of patient care practices were conducted and findings communicated to NICU staff.

Results:

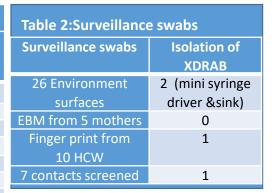
9 neonates were colonised or infected with a total of 13 MDROs. All 9 neonates harboured XDR-AB.

The XDR-AB isolated from the neonates & surveillance swabs had similar sensitivity patterns

Kp= Klebsiella pneumoniae, CR= carbapenam resistant , ESBL=extended spectrum betalactamases; TA=Tracheal aspirate; NPS= Nasopharangeal secretion; HAC= Hospital Acquired Coloniser, HAI= Hospital acquired Infection, VAP= ventilator associated pneumonia, CRBSI= catheter related blood stream infection, HH=hand hygiene, PPE= personal protective equipment

lable 1: Summary of patients narbouring XDRAB							
			Age during	Site of isolation of	Other MDRO	Infection	Outcome
	BW	GA	MDRO isolation	MDRAB		or colonise	(30 days)
No	(gm)	(wks))	(days)				
1	845	27	10	TA	ESBL Kp	HAC	Alive
2	1305	30	13	NPS	-	HAC	Alive
3	570	27	6	blood	-	HAI	Dead
4	1265	33	28	Swab omphalocoele	-	HAI	Dead
5	1515	31	14	Blood	-	HAI	Dead
6	1635	33	28	Throat swab	ESBL Kp,CR-Kp	HAC	Alive
7	1730	31	16	Rectal swab		HAC	Alive
8	1535	31	24	TA	ESBL Kp	HAI	Alive
9	1725	34	5	Eye swab		HAC	Alive





Interventions resulted in reduction of MDROs & no further XDR-AB isolates

Conclusion:

necessary to identify an outbreak promptly.
The spread of XDR-AB was suspected to have arisen from contaminated equipment and pathogen transmission via close contact. Revision of protocols and rigorous infection control enforcement by a multidisiplinary team, resulted in outbreak containment.

Daily surveillance for MDRO is



