



HCAIs beyond an acute care setting and the role of new technology

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Content of talk



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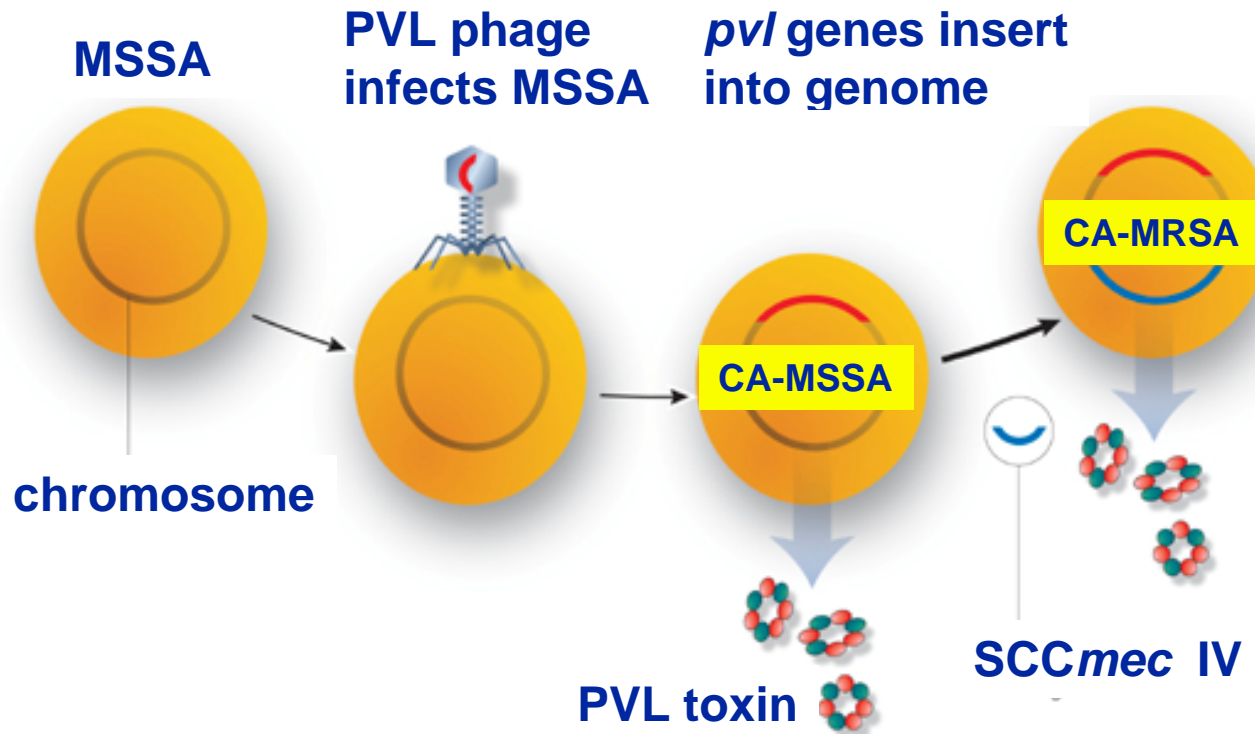
- **The threat from MRSA is changing**
- **Transmission of MRSA in the community**
- **New technology**
 - **Improved diagnosis and therapy**

We must be better prepared to face this new threat!!

Threat from MRSA is changing



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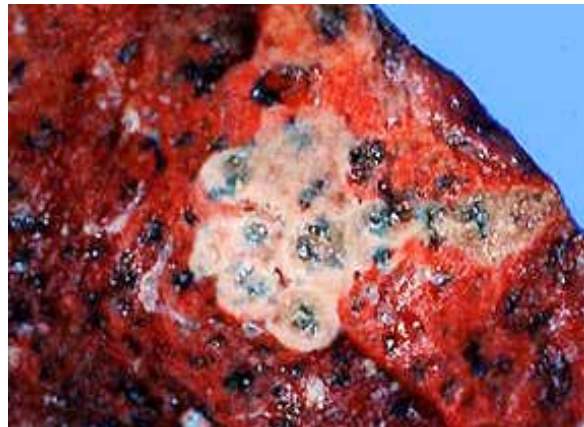


**Cause infections in the young and healthy
MSSA producing PVL is a significant pathogen**

CA-MSSA/MRSA Infections



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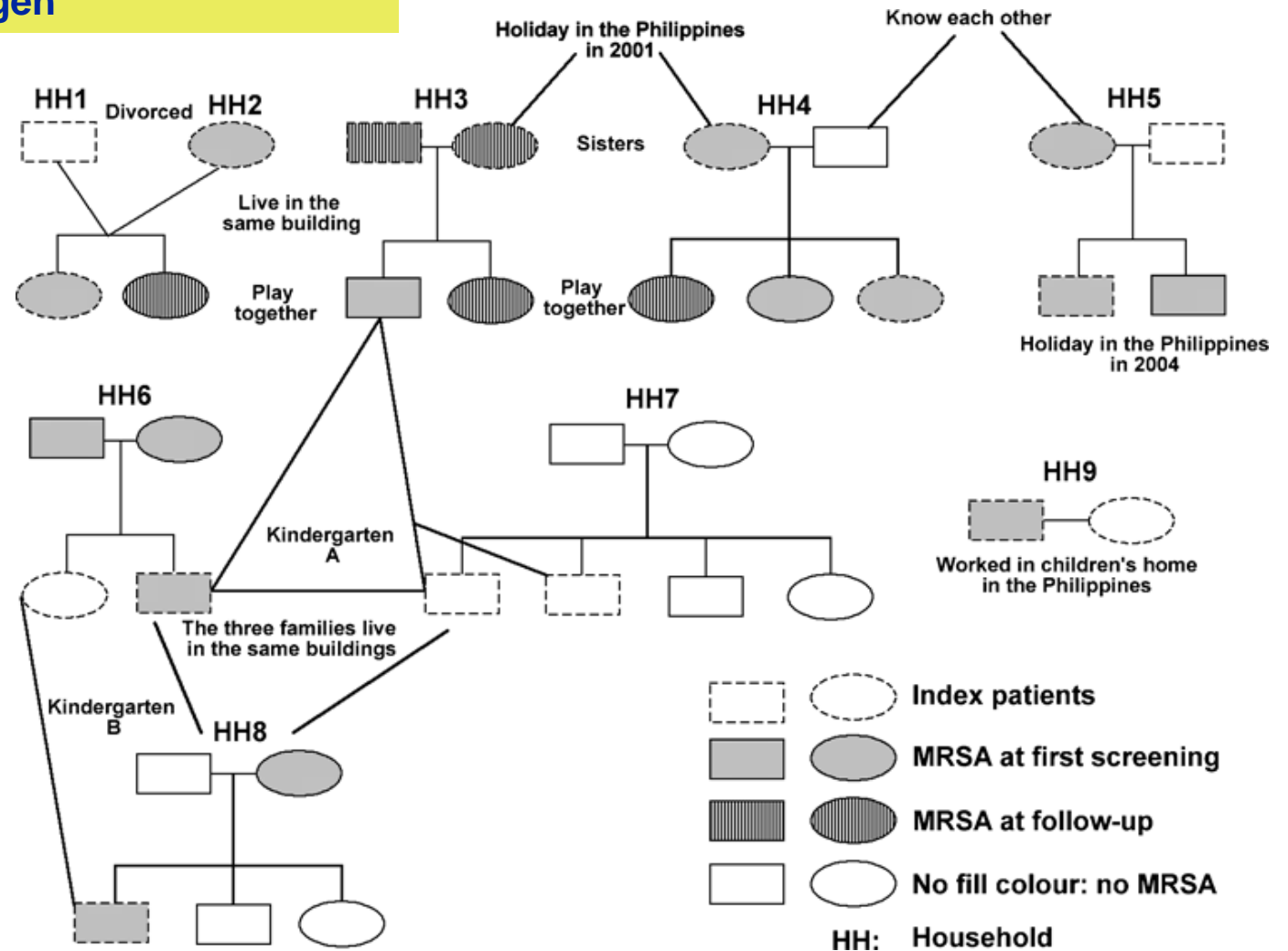
50% mortality in 72 hrs
Link with a viral co-infection

Necrotizing pneumonia

Transmission of CA-MRSA



Bartels *et al.* Clin. Microbiol. Infect. (2009)
ST30-IVc in Copenhagen



Similar spread
- in US prisons
- close contacts in UK

New technology - POC Diagnostics

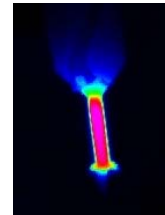


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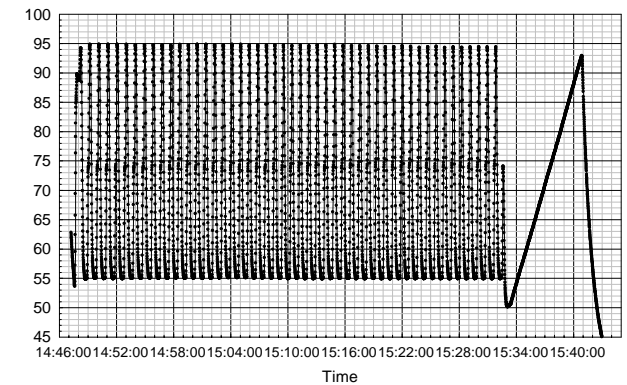
Sample Processing

Magnetic beads
Robotic processing
Stabilised reagents



Thermal Cycling

Rapid transitions



Raw sample to result <45 mins

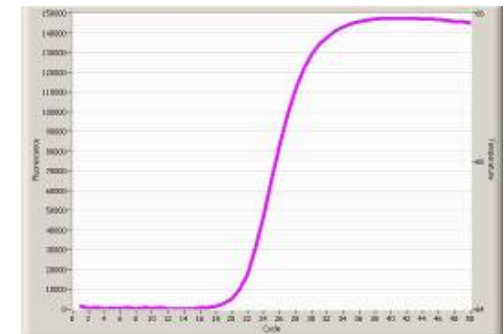


Algorithms

Automated analysis
On-screen display

Fluorimeter

Sensitive multiplexed detector

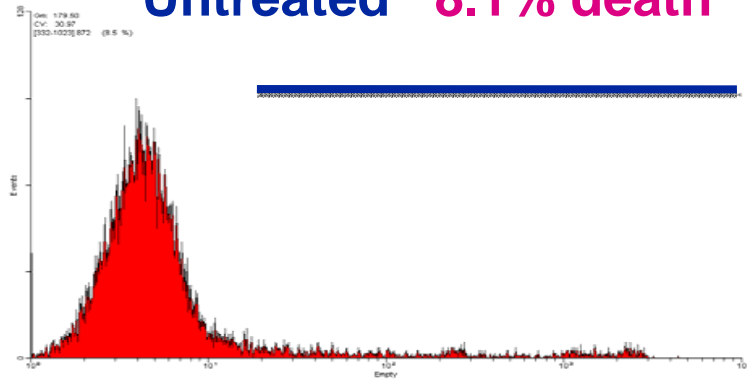


New technology – PVL antibody

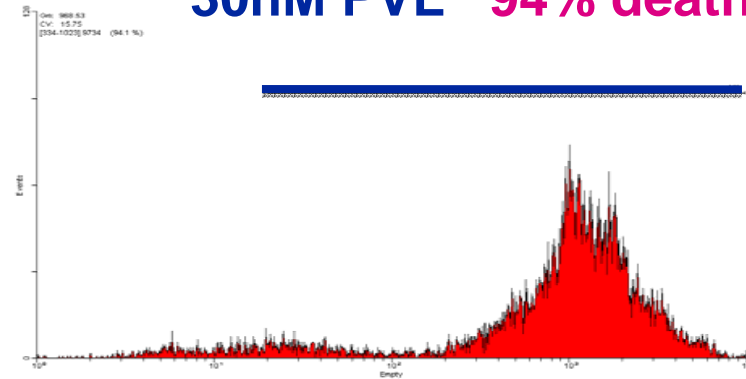


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Untreated 8.1% death

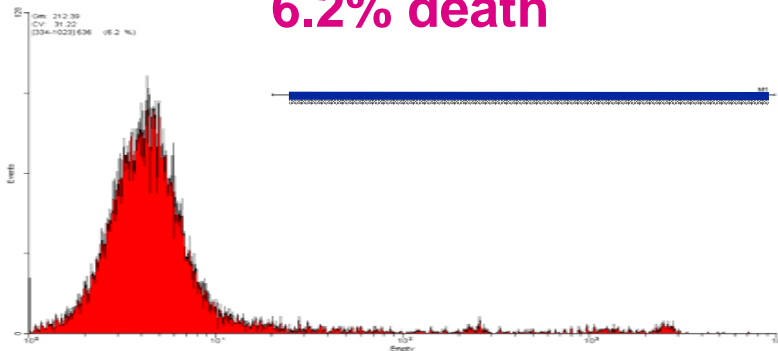


30nM PVL 94% death



30nM PVL + 20 µg anti LukS mab

6.2% death



**Antibodies can be used
in diagnostic tests
and therapeutically**