

One Health: Its impact on biosecurity procedures

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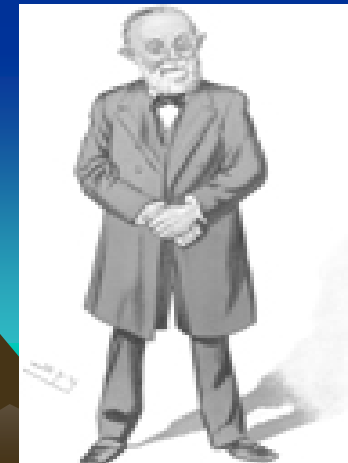
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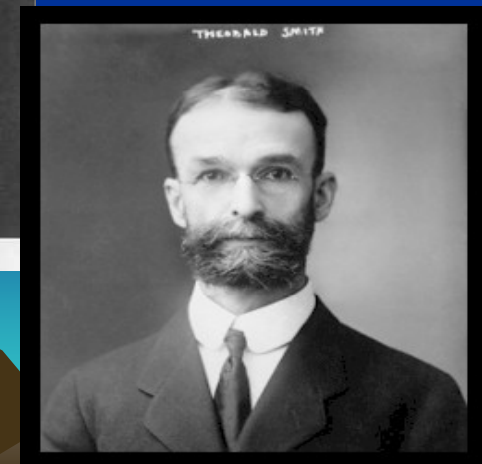
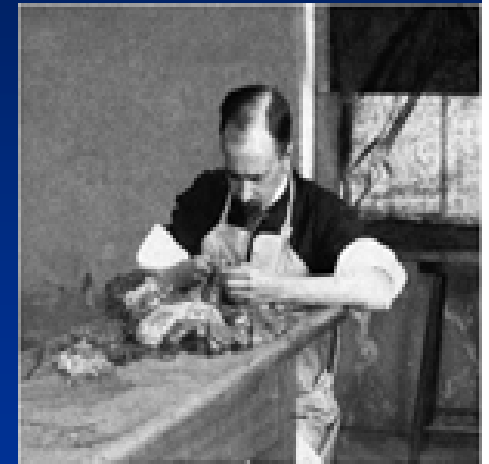
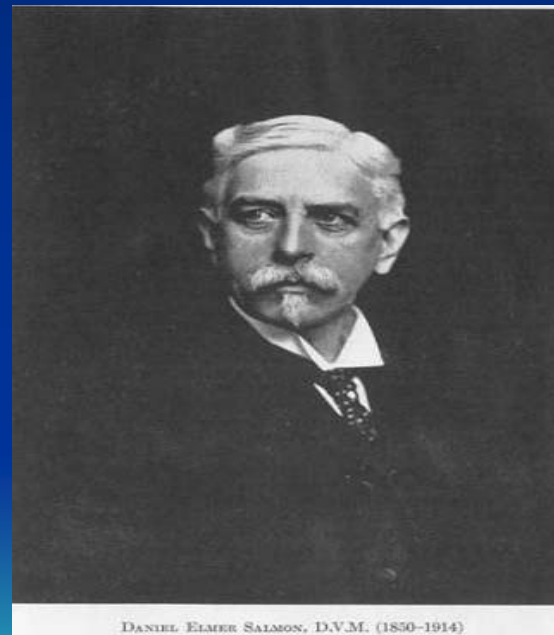
*"Between animal and human medicine there is no dividing line – nor should there be. **The object is different but the experience obtained constitutes the basis of all medicine.**"*

RUDOLF VIRCHOW (1821-1902)



What is “One – Medicine/Health”?

- William Osler - A Canadian physician
- Daniel Salmon
- Theobald Smith
- Leaders in public health



What is “One – Medicine/Health”?

- Many definitions and interpretations of this concept have been generated and/or used in the last few years.



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[One Health Initiative - One World One Medicine One Health](#)

The **One Health** Initiative, a movement to forge co-equal, all inclusive partnerships between physicians, veterinarians, and other scientific-health related ...

www.onehealthinitiative.com/ - [Cached](#) - [Similar](#)



[MyGreatWest.com :: Great-West Healthcare Member Site](#)

Important Changes on the Road to CIGNA. MyGreatWest.com has a new address. It's now myCIGNAforhealth.com (MyGreatWest.com is still available). ...

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[One World One Health](#)

Website for One World **One Health**, a symposium held in September 2004 by the Wildlife Conservation Society and Rockefeller University.

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One Health : A New Professional Imperative. **One Health** Initiative Task Force: Final Report ... Appendix C: **One Health** Initiative Draft Proposal for Funding ...

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One Health logo The **One Health** concept arose from the realization that human health and animal health are inextricably linked and that a holistic approach ...

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[Great-West Healthcare - Great-West Healthcare](#)

Same sites, different names. Our member website (MyGreatWest.com) is now myCIGNAforhealth.com (although MyGreatWest.com is still available) and ...

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Biosecurity and One Health!!

WHAT IS THE LINK?



Biosecurity: A new look at an old concept



Courtesy of Dr. K. Pabilonia

Current Perspective

- A few years ago use of the term 'biosecurity' was uncommon other than in a few select circles.
- Recent events have brought attention to the concepts of biosecurity
 - BSE
 - FMD in the UK
 - SAR
 - 9/11

Important Definitions

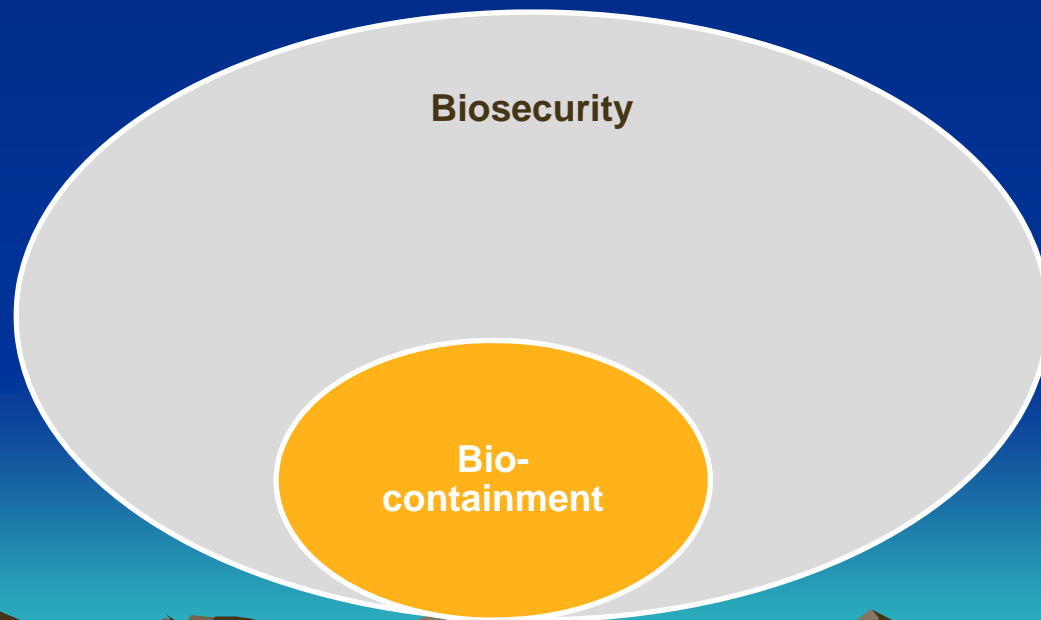
- Biosecurity
 - The result of disease agent's **exclusion activities**
 - Often at the perimeter
 - **Not just a quarantine or isolation**
 - Not limited to infectious agents (also potential toxicants)

Important Definitions

- **Bio-containment**

- Pertains to **microbiology laboratories in which the physical containment of highly pathogenic organisms is required;**
- Usually by isolation in environmentally and biologically secure cabinets or rooms;
- **Prevent accidental infection** of workers or release into the surrounding community during scientific research.

All bio-containment measures are part of Biosecurity



Important Definitions

- Infection Control Strategies
 - Actions to achieve biosecurity
 - Relies on understanding of the epidemiology of the agent
 - Agent characteristics
 - Disease transmission
 - Incubation period
 - Host shedding
 - Susceptible species

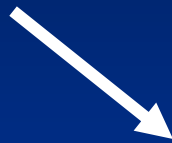
Principles of Infection Control



- Big Picture
 - Minimize exposure
 - Optimize resistance
- Not new concepts
 - But not necessarily used

Triad of Infectious Disease

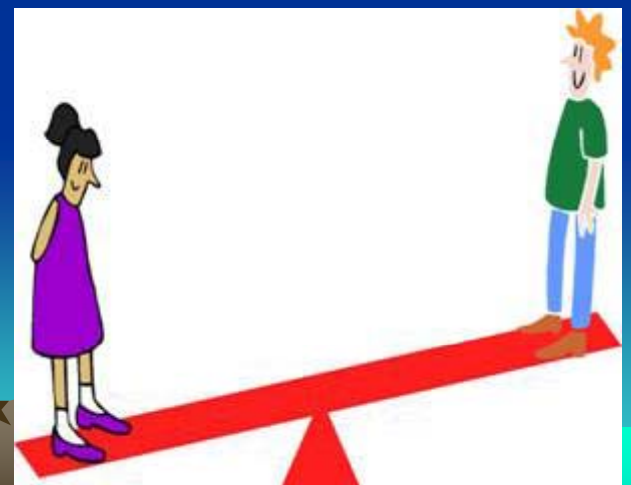
Agent factors:
Infectivity and
pathogenicity



Environmental factors: exposure to agent, weather, housing conditions



Host factors: natural barriers, competitive exclusion, immune response



Biosecurity Plan

- Assess public concerns = risk perception
- Assess environment and management practices = risk assessment
- Target management = risk management
- Provide education and awareness = risk communication
- Monitor!!

One Health-- Concepts

- Consider the big picture;
- Integrate several disciplines in the approach;
- Focus on source of the problem – preventive measures;
- **Maintain the principles of exclusion of the agent from the environment.**

Global Health Issues and Biosecurity

- SAR
- Anthrax
- H5N1
- H1N1

Avian Influenza



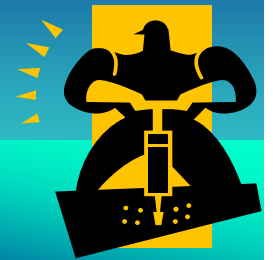
(AP PHOTO)

How can Biosecurity contribute to One Health?

- Biosecurity should be a component of the One Health approach;
- Biosecurity would require multi-disciplinary approaches that engage professions within the One Health spirit;
- One Health term should be used as a way to promote preventive measures of diseases and NOT as another way for treatment.

How can Biosecurity contribute to One Health?

- Emphasis should be on preventive measures and less on treatment;
- Global health should be the focus but local action should be implemented.



Conclusions

- One Health should attempt as much as possible to integrate other related disciplines in their approaches for the wellbeing of humans and animals including preventive measures of animal diseases.
- Education in veterinary and human medicine should integrate the principles of preventive medicine with emphasis on the importance of biosecurity.

Conclusions

- Both the medical and veterinary professions should emphasize preventive measures and place less emphasis on treatment.
- This new emphasis would require integration and synthesis of measures and other actions to reduce the disease impact in both animal and human populations.
- There is a need to join forces to combat adverse health events in society.