Three early IPC pioneers:

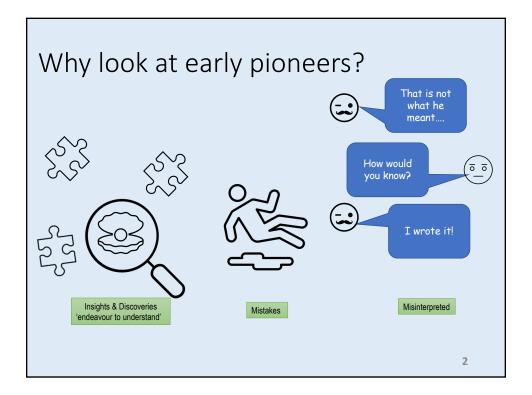
who can still teach us a thing or two.

Dr Evonne T Curran NursD Glasgow Caledonian University

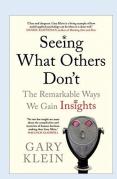
Hosted by Karen Wares Infection Prevention Society, Scotland

www.webbertraining.com

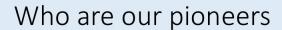
February 8, 2022



"Insights arise from: contradictions, connections, & creative desperation"



3

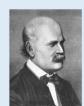




Dr Alexander Gordon 1752 - 1799

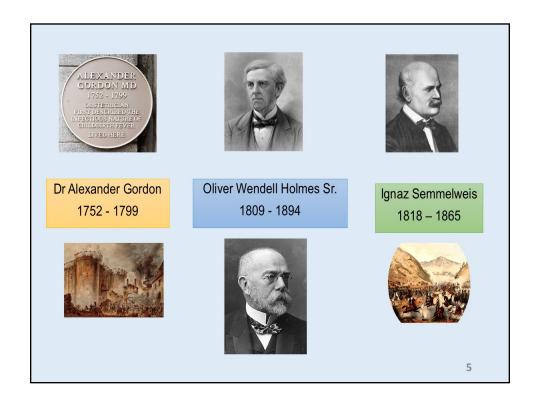


Oliver Wendell Holmes Sr. 1809 - 1894



Ignaz Semmelweis 1818 – 1865

4



Erysipelas & Puerperal fever

Invasive Gp. A Streptococci (iGAS)



A time when diseases were diagnosed by appearance

No IPCN/Ts

No antibiotics

No micro - lab

6



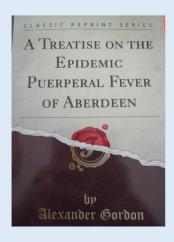


Graduated 1780 – Royal Navy London – Lying-in hospital Aberdeen 1785 – private practice

Puerperal fever never seen before in Aberdeen (AG had seen it in London)

1789 first case in Aberdeen

7

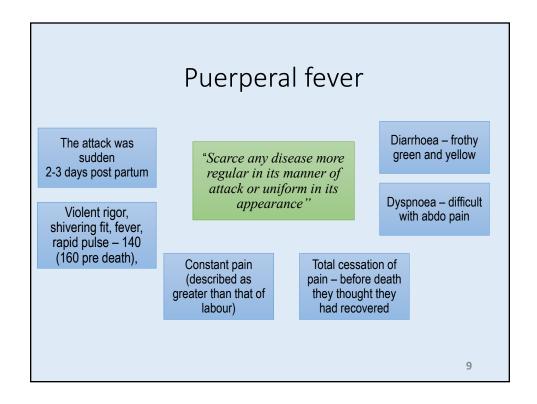


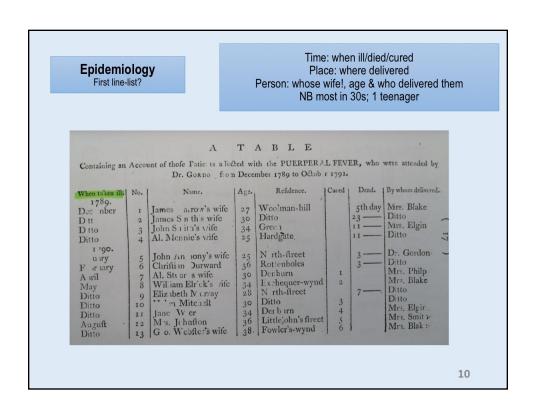
Case series & studies
Epidemiology
turned data into
intelligence

77 women

28/77 died (36%) (not inc babies)

8





"I have unqueftionable proof."

"That the caufe of this difeafe is a fpecific contagion or infection."



He detected community outbreaks without a micro lab

11

"I have unqueftionable proof."

"That PF is of the nature of eryfipelas.
They are connected."



12

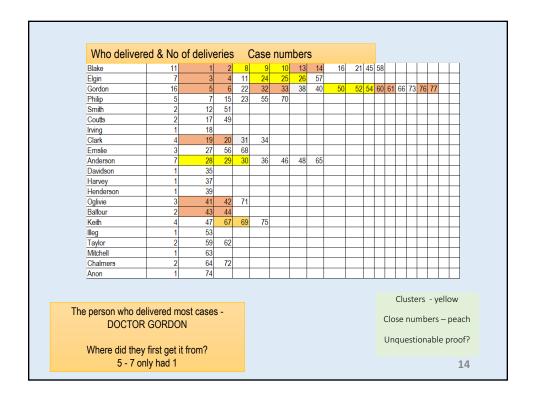
"I have unqueftionable proof."

"I could venture to foretell what women would be affected with the difease upon hearing which midwife they were to be delivered or by which nurse...



...and almost every instance my prediction was verified."

13



"I have unqueftionable proof."

"That every person, who had been with a patient with PF, became charged with an atmosphere of infection which was communicated to every pregnant women that they came into contact within their fphere."



15

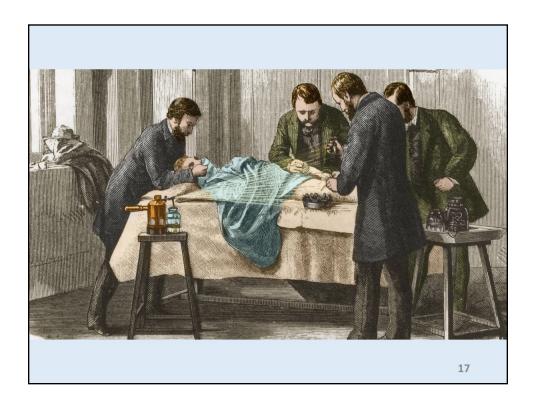
Special Issue

"Cloud" Health-Care Workers

Robert J. Sherertz, Stefano Bassetti, Barbara Bassetti-Wyss Wake Forest University School of Medicine, Winston-Salem, North Carolina, USA

Certain bacteria dispersed by health-care workers can cause hospital infections. Asymptomatic health-care workers colonized rectally, vaginally, or on the skin with group A streptococci have caused outbreaks of surgical site infection by airborne dispersal. Outbreaks have been associated with skin colonization or viral upper respiratory tract infection in a phenomenon of airborne dispersal of Staphylococcus aureus called the "cloud" phenomenon. This review summarizes the data supporting the existence of cloud health-care workers.

16





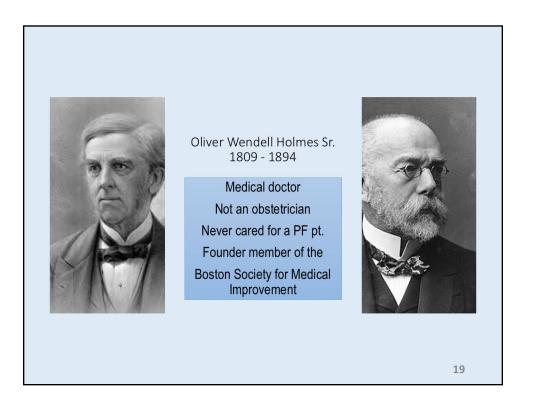


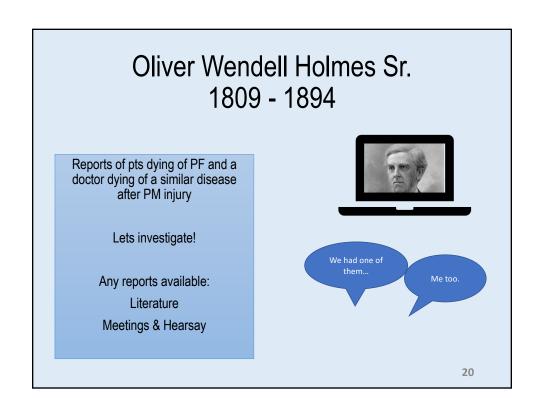
Achievements

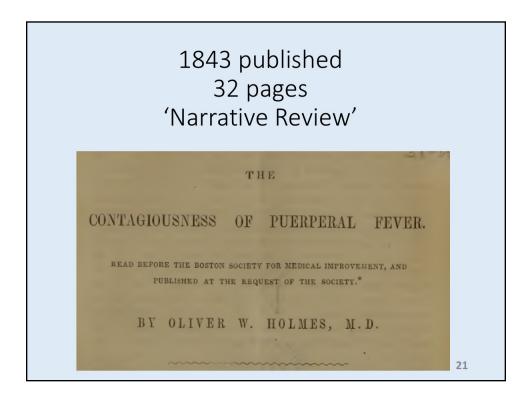
Its infectious
Its related to erysipelas
Its carried from one person to
another by HCWs
Epidemiology – time place person
Described in detail the pathology
of the disease and its progress
Case studies

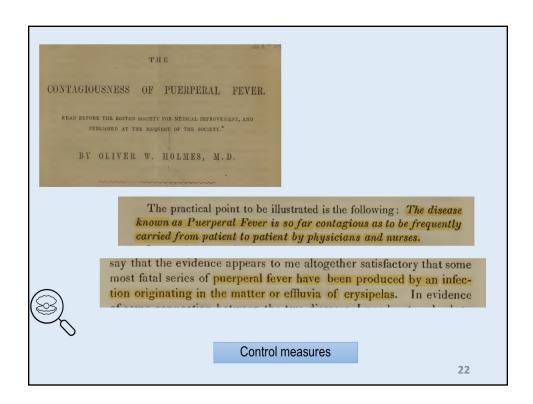
Data protection (nil point)

18









Mr White	None <1795	Possibly published	Knows of people in another town		Anecdote	
Dr Armstrong	not listed	phps in discussion	Aware of other doctors associated with transmission		Anecdote	
Dr Gooch	not listed	says	Practitioner opened the body of a women died of PF. Women who he delivered a few days later died . Then 2 more	3	Anecdote	
Pos Dr Gooch	1824	says	GP in midwifery lost so many from PF stopped practice for sometime. After 1 month the first person GP attended died.		Anecdote	
Pos Dr Gooch			Saw 4 cases in 1 month all by same clinician	4	Anecdote	
Dr Ramsbotham		lecture london hospital	Know of disease spread through a district but kept to the practiceof a single consultant.		Anecdote	
Mr Roberton	1840	published	Event 1830: midwfe delivered woman; died PF - within 1 mth delivered 30 more of whom 16 got infected. Others 25 delivered 90 per week - none got it. Not easily transferred to other midwives.	16	Anecdote	
Dr Blundell	?	Comments	Knows of 1 district PF in some individuals have many others not. Some have lost 12	12	Anecdote	
Dr King	1840	RMSociety	Knows of a clinician who lost 16 from PF. Compelled to give up practice	16	Anecdote	
Mr Hutchieson	1840	RMSociety	A practitioner at Woolich 3 consecutive cases .	3	Anecdote	
Dr Lees	1827	Meeting	5 fatal cases same midwife. None in community	5	Anecdote	
Dr Francis		Book	Several lying-in women - conveyed by accuouchers		Anecdote	
Dr Rutter	1842	Meeting remarks	A number of cases by 1 doc, he left the city for 1 week. Changed closthes but first case back PF fatal		Anecdote	
Dr Meigs	1842	meeting remarks pub	Those cases I discussed now numbering 70 within 12 mths - prof of midwifrey		Anecdote	
OWH			Mr Tavers poisoned by fluid which exuded from the body		Anecdote	
Dr Condie		Quart coll summary	gentleman nearly every female 'several weeks' attached with the fever. No where else I the district.	·	Anecdote	23

Dr Salem	1829	NY journal	5 consex of PF. Every pt attended attacked. Mch 2 July 1. No cases by other 20 in total.	20	Cluster	
Dr Warrington		Meeting	Few days post PM puerperal peritonitis, called to deliver 3 all got PF 2 died 5 later in total	5	Cluster	
Dr West		Letter	delivered in raid succession all attacked and 5 died. Named doctor. Attending a person with enysipelas before delivering. Used same gloves and instruments used on a case of erysipelas	7	Cluster	
Dr Condie	1842	Boston MA	7 consecutive cases 5 dead. All belong to Dr C. Who left town. Preceeded by attendance at PM of man with enysipelas. Nuse who laid out body got sick with enysipelas and sore throat died 10 days later. Nurse who laid out body 4 died 1 week later	7	Cluster	
Dr Storer	1843	Letters	6 women 1 month all well except the last. PM 4 subsequent cases. I wore the same clothes	6	Cluster	
Dr Storer	1843	Letter	2 had PF 1 had infected leg	2	cluster	
Dr Campbell	1821	Lon Med Gaz	Assisted at PM of case Carried the pelvic visera in his pocket to the classroom. Same pm attended women in labour.	5	Cluster	
Dr Campbell	1823		Assisted some publis at PM of case - unable to wash hands without further ablution to 2 women in labour	2	Cluster	
Mr Roberton			Catheter passed on pt with PF - attended another lady who died of PF. Surgeon who inspected body attended another in labour who died of PF.	2	Cluster	
Anon	1831	Published	Dr examined PF body. Delivered pt 2 days later pt died PF - then 2 otthers	3	Cluster	
Dr Rigby	1842		Young practit examined PF PM. Delivered 3 who sub died of PF	3	Cluster	
Mr Ingleby	1833	Ed Med & Surg J	2 men PF PM went in same clothers to midwifrey case who died total of 7 cases	7	Cluster	
OWH	1843	quote reg gen	Dublin 1 - 178 - but when endemic much higher Outbreaks in hospital horrendous		Comment	
Dr Gordon	1795	Treatise	Inv report of clusters of cases associated with specific midwives and doctors	77	Cluster	
Dr Armstrong	not listed	published	43 cases in 10 months single practitioner Sunderland	43	Cluster	
Dr Davies	1822	Pub 1828	He met 12 cases whilst others in the neighbourhood med none	12	Cluster	
Dr Gooch	not listed	says	Dr performed PM on PF cases wore same clothers; 3 laying in pts died shortly thereafter	3	Cluster 2	4

			Dr attended PM of PF dissected organs and		
Anon	1829	Same journal	helped sew up attended women in labour who died of PM 16 hours later	1	Single case
Anon	1830		Midwife who attended 2 fatal PF examined a new admission who sub died of PF	1	Single case
Recently before society			physician went post PF PF to women in labour who died	1	Single case
Dr merriman		Med Chiru Jour	At PF PM did not touch the body - went to women in labour who died and infant died 2 days later	1	Single case

puerperal fever. He carried the pelvic viscera in his pocket to the class room. The same evening he attended a woman in labor without previously changing his clothes; this patient died. The next morning he delivered a woman with the forceps; she died also, and of many others who were seized with the disease within a few weeks, three shared the same fate in succession.

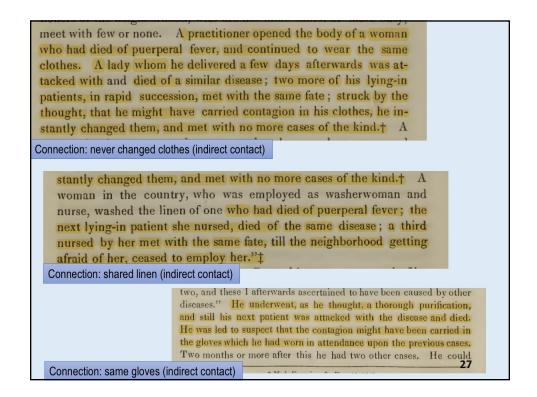
Connection: PMs, to individual physician to next patient - direct and indirect contact

were employed by these patients. When the first case occurred, he was attending and dressing a limb extensively mortified from erysipelas, and went immediately to the accouchement with his clothes and gloves most thoroughly imbued with its effluvia. And here I

Connection: erysipelas and lying-in. Indirect contact gloves / clothes

26

25



"While I attended these women in their fevers, I changed my clothes, and washed my hands in a solution of chloride of lime after each visit. I attended seven women in labor during this period, all of whom recovered without sickness.

Hand hygiene with chlorine of lime pre-Semmelweis



- has been laid before him.

 1. A physician holding himself in readiness to attend cases of midwifery, should never take any active part in the post-mortem examination of cases of purepera fever.

 2. If a physician is present at such autopsics, he should use thorough ablution, change every article of dress, and allow twenty-four hours or more to elapse before attending to any case of midwifery. It may be well to extend the same caution to cases of simple peritonitis.

 3. Similar precautions should be taken after the autopsy or surgical treatment of cases of erysipelas, if the physician is obliged to unite such offices with his obstetrical duties, which is in the highest degree inexpedient.
- degree inexpedient.
- unite such offices with his obsetrical duties, which is in the ingrest degree inexpedient.

 4. On the occurrence of a single case of puerperal fever in his practice, the physician is bound to consider the next female he attends in labor, unless some weeks, at least, have clapsed, as in danger of being infected by him, and it is his duty to take every precaution to diminish her risk of disease and death.

 5. If within a short period two cases of puerperal fever happen close to each other, in the practice of the same physician, the disease not existing or prevailing in the neighborhood, he would do wisely to relinquish his obstetrical practice for at least one month, and endeavor to free himself by every available means from any noxious influence he may carry about with him.

 6. The occurrence of three or more closely connected cases, in the practice of one individual, no others existing in the neighborhood, and no other sufficient cause being alleged for the coincidence; is prima facie evidence that he is the vehicle of contagion.

 7. It is the duty of the physician to take every precaution that the disease shall not be introduced by nurses or other assistants, by making proper inquiries concerning them, and giving timely warning of every suspected source of danger.

 8. Whatever indulgence may be granted to those who have here

- 8. Whatever indulgence may be granted to those who have here-8. Whatever indulgence may be granted to those who have here-tofore been the ignorant causes of so much misery, the time has come when the existence of a private pestilence in the sphere of a single physician should be looked upon not as a misfortune but a crime; and in the knowledge of such occurrences, the duties of the practitioner to his profession, should give way to his paramount obligations to society.

Control Measure Recommendation

People who attend PMs of PF cases should not deliver women

If you are associated with cases, don't work.

[Hand hygiene was not enough] 4-years pre Semmelweis' work

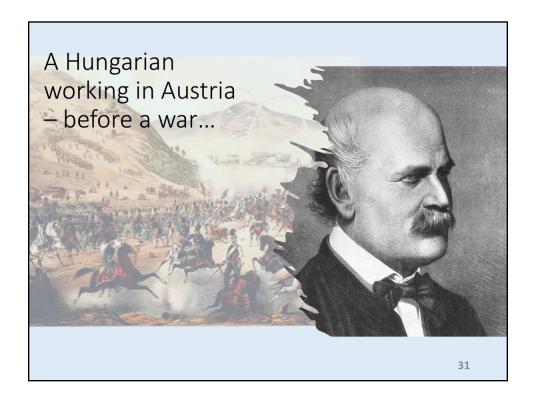


Children who walk in calico before open fires are not always burnt to death

OWH



30

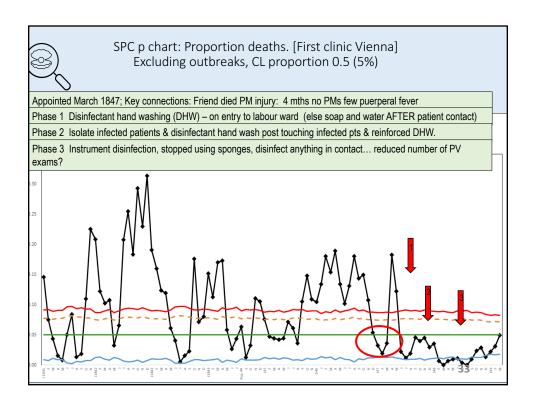


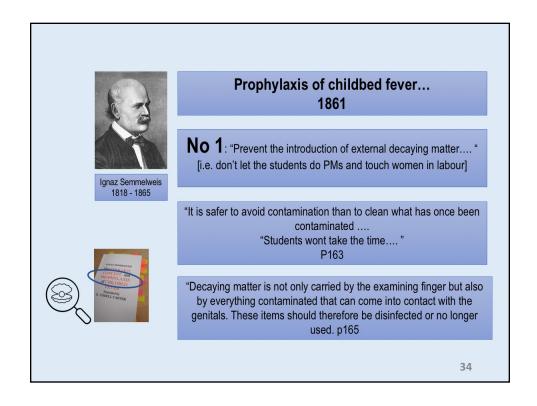
Already known

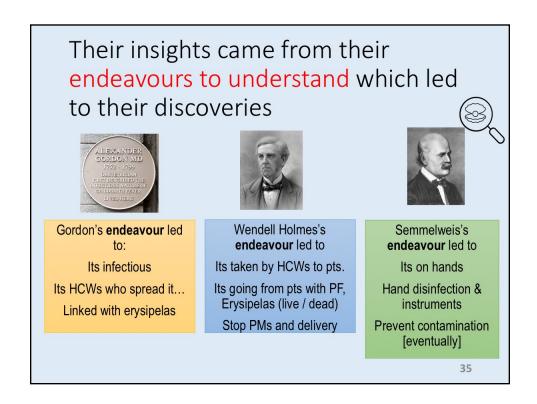
Midwives X 3 lower mortality than the medical service – investigated

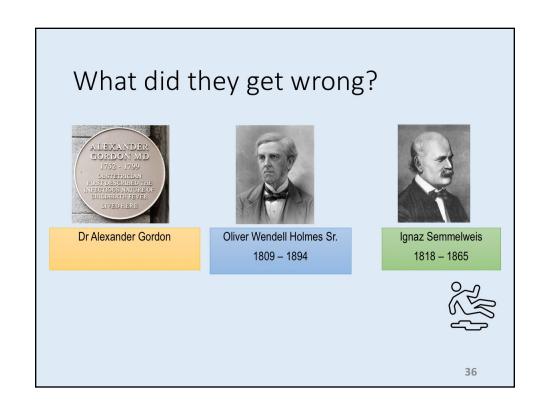
Only difference between the 2 clinics – midwives do not attend PM room

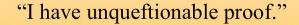
32











"I could venture to foretell what women would be affected with the difease upon hearing what midwife they were to be delivered or by what nurse they were to be attended... ... and almost every instance my prediction was verified."



Theory did not fit all cases – some only had 1

Where did they get it from?

If he could predict why not prevent?

Treatment – extensive bleeding



37



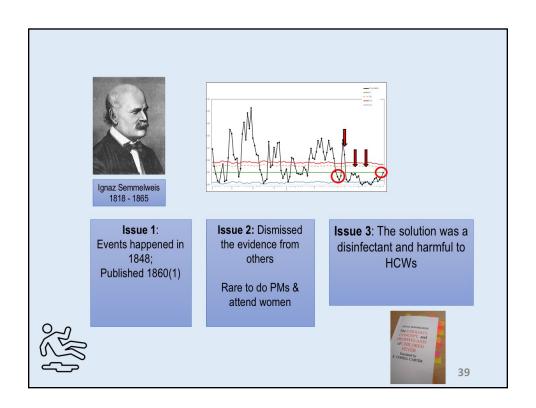
Treated all evidence as equal Took Gordon at face value -

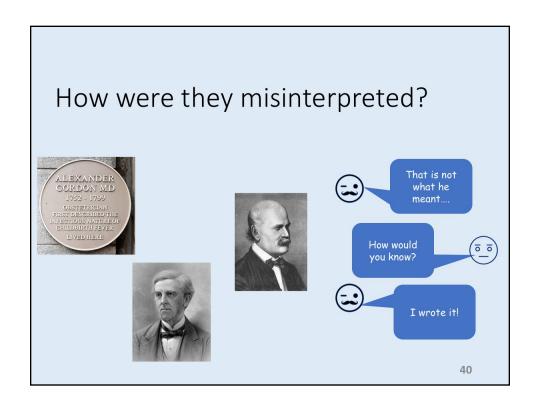
infection, altogether unconnected with a noxious constitution of the atmosphere."

But his most terrible evidence is given in these words, "I ARRIVED AT THAT CERTAINTY IN THE MATTER, THAT I COULD VENTURE TO FORE-TELL WHAT WOMAN WOULD BE AFFECTED WITH THE DISEASE, UPON HEARING BY WHAT MIDWIFE THEY WERE TO BE DELIVERED, OR BY WHAT NURSE THEY WERE TO BE ATTENDED, DURING THEIR LYING IN: AND, ALMOST IN EVERY INSTANCE, MY PREDICTION WAS VERIFIED."

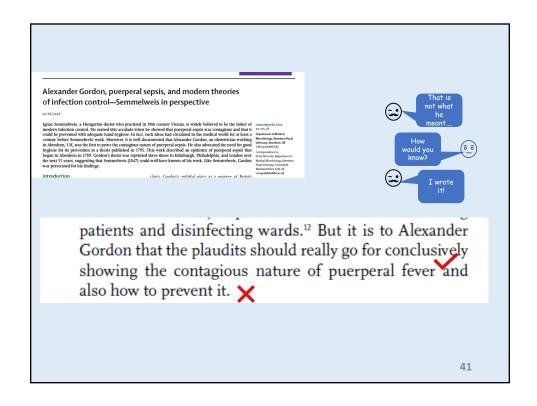
Even previously to Gordon, Mr. White of Manchester had said, "I

38





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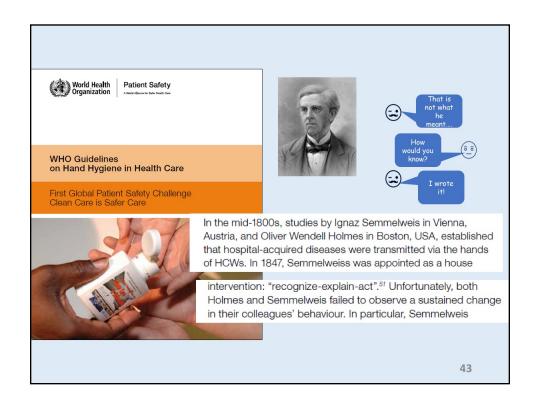


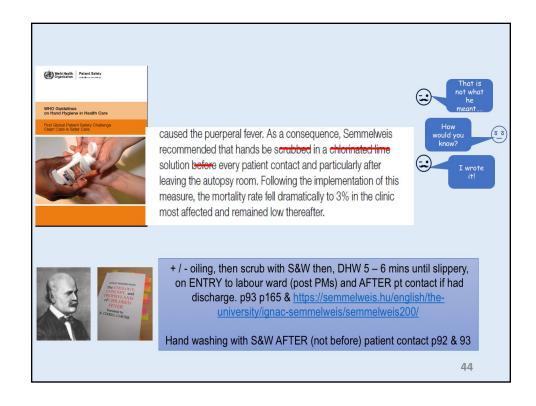
"With respect to the most effectual means of preventing the disease from being communicated, I must speak with great uncertainty, because I have not experience for my guide."

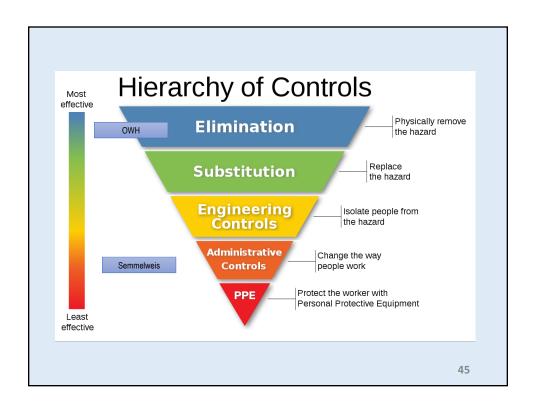
Others recommend fumigation of infected apparel Fresh air and cleanliness are insufficient Wash you clothes if you delivered a PF patient



42





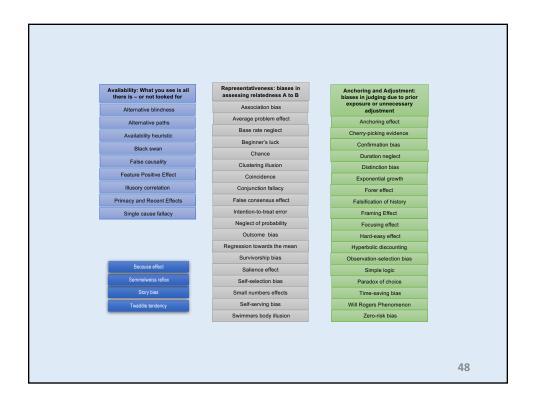


Was the Vienna Hospital – an organisation without a memory?

history of lying-in hospitals. The puerperal abscesses are also contagious, and may be communicated to healthy lying-in women by washing with the same sponge; this fact has been repeatedly proved in the Vienna Hospital; but they are equally communicable to wo-

Confirmation bias the tendency to search for, interpret, favour, and recall information in a way that confirms or supports one's prior beliefs or values.

47





Beware – the halo effect

S/he/they never make a mistake...

Everyone makes mistakes!

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Does it matter – if they got it wrong, (deliberately or through misinterpretation)?

- Yes if used to support recommendations
- Yes if their goal was to be accurate

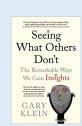
50

The journey to new (and old) knowledge is fascinating and filled with examples of mis-steps from which we also learn

Key: Where could I be wrong? What am I missing?

51

From our endeavours we gain insights

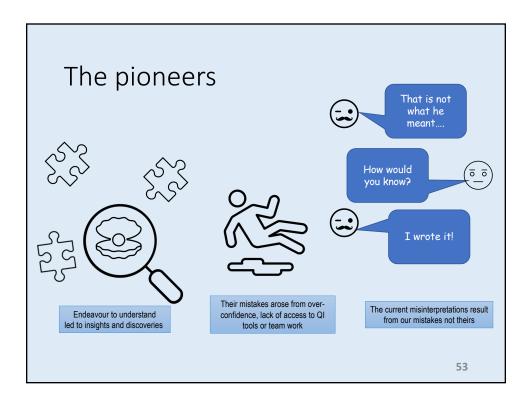


"Insights shift us toward a new story, a new set of beliefs that are more accurate more comprehensive and more useful."

Seeing what others don't the remarkable way we gain insights

Gary Klein

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February 10, 2022	RETHINKING SOLUTIONS FOR PUBLIC HEALTH PROBLEMS: A HOLISTIC ONE HEALTH SOCIAL SCIENCE (OHSS) SYSTEMS APPROACH Speaker: Dr. Laura C. Streichert, One Health Commission, Switzerland
February 17, 2022	ASSESSING THE CLINICAL ACCURACY OF A HAND HYGIENE SYSTEM Speaker: Dr. Marco Bo Hansen, Copenhagen University Hospital, Denmark
February 24, 2022	VACCINE HESITANCY WHAT'S HAPPENING? Speaker: Prof. Rodney Rohde, Texas State University
March 3, 2022	(FREE Teleclass Denver Russell Memorial Teleclass Lecture) BENEFITS AND POTENTIAL UNINTENDED CONSEQUENCES OF ROUTINE CHLORHEXIDINE BATHING IN HEALTHCARE FACILITIES Speaker: Prof. Mary Hayden, Rush University Medical Center, Chicago
March 10, 2022	HAND HYGIENE: NOT JUST FOR HEALTH CARE WORKERS ANYMORE!! Speaker: Dr. Jocelyn Srigley, University of British Columbia
March 17, 2022	INFECTION CONTROL IN CORRECTIONAL FACILITIES Speaker: Nyreith Adeyemi, California Correctional Health Care Services
April 7, 2022	MANAGEMENT PRACTICES FOR LEADERS TO PROMOTE INFECTION PREVENTION Speaker: Dr. Ann Scheck McAlearney, Ohio State University College of Medicine

