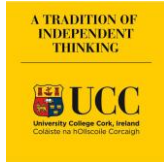


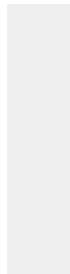


Infection Prevention and Control A Foundation Course 2014



Infections in the elderly

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2014

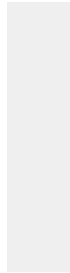


What is colonisation?

- Colonisation is when micro-organisms are present on a person and do not cause any systemic signs of infection.
- A micro-organisms can be bacteria, viruses, fungi, protozoa, prions,

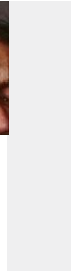


Illustration: Dan Smith



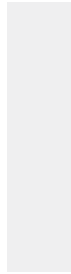
What is an Infection?

- An infection occurs when a micro-organisms invades and multiplies within a person body causing systemic signs.
- These include Redness, Heat, Swelling, Exudate. Temperature, Increased WCC, Pain, Diarrhoea and Vomiting.



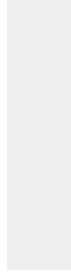
The aging process on Systems

- The Cardiovascular changes such as heart valves become thick and rigid, Poor blood flow, Peripheral Vascular Disease.
- The Endocrine system- decreased hormones and decreased insulin response to glucose.
- Gastro-intestinal such as poor motility swallowing disorders and constipation
- Taste and Smell changes such as decrease senses making food and drinks less appealing
- Musculoskeletal changes include decreased bone density and decreased muscle mass
- Neurological changes include gradual loss of neurons – cognitive impairment.
- Pulmonary changes Weakened intercostal muscles decreased gag reflex
- Skin- Thinning of layers, fewer sweat glands decreased elasticity
- Urinary System changes such as decreased renal function loss of muscle strength.



Risk Factors in LTC facilities.

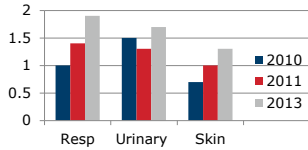
- Reduced Immune response.
- Co-morbidities. ie Diabetes, CVA
- Multiple admissions to HCF.
- Complication to treatment
i.e. Multiple medications. Invasive devices.
- Other Resident contacts. Staff contacts.
- Depression.
- Decreased Mobility.
- Delay in diagnosis.
- Malnutrition



Type of Infections seen in Residential care

- Halt study

The 2013 Halt study is a point prevalence study showed that the most common infections seen were



Types of Infection seen in Residential Facilities

- Other common infections
- Gastro-intestinal



Infections of the skin

- Cellulitis
- Shingles (Varicella Zoster)
- Scabies
- Dermatophyte infection
- Wound Infection
- Leg ulcers



Respiratory Infections

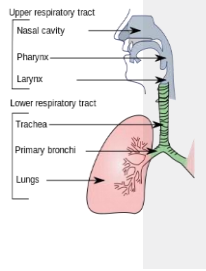
• **Upper Respiratory Tract Infection URTI**
Eg. Common cold, tonsillitis, laryngitis

• **Lower Respiratory Tract Infection LRTI**
Bronchitis, Acute Exacerbation Chronic Bronchitis (AECB) and Pneumonia

Acute Bronchitis, can be either caused by a bacteria or virus and affects healthy patients.

AECB usually non infective, 50% are colonised with bacteria *Strep pneumoniae* or *Haemophilus influenzae*, or *Moraxella catarrhalis*.

Antibiotics should only be given if increased dyspnoea increased sputum volume and purulence



Influenza

• Viral respiratory illness

Sudden onset

Fever, Rigors, malaise, non productive cough, Muscle aches, headache, rhinitis

Usually resolves in 3-7 days

Can cause pneumonia



LRTI - Pneumonia

• Pneumonia occurs in the community and in the health care setting and it is life threatening in the elderly.

• It is an inflammation of the lungs caused by an infectious agent.

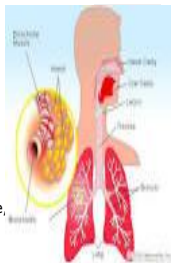
• This can be bacterial viral or fungal

• The air sacs are filled with pus or exudate.

• The most common cause of pneumonia is pneumococcal bacteria *Streptococcus pneumoniae* accounts for 2/3 of cases

• Other bacteria include *Klebsiella pneumoniae*, *Haemophilus influenzae* and *Staphylococcus aureus*.

• CURB>65



CURB-65 British Thoracic Society Guidelines

		Score
C	Confusion	1
U	Urea >7	1
R	RESP >=30	1
B	Bp Systolic <=90mmHg or Diastolic<=60	1
65	Age greater than 65 years	1

CURB -65 SCORE	Risk Group	30 day mortality	
0-1	1	1.5%	Home
2	2	9.2%	Likely to need admission
3-5	3	22%	Admit to acute care ICU



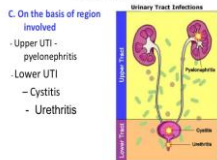
Urinary Tract Infection

• UTI means an infection of any part of the urinary tract
The incidence rate is approx 10% in women and 5.3% in men over the age of 80

Sign and Symptoms

- Fever >39oC
- Rigors
- Bilateral flank pain
- Pain on voiding
- Haematuria
- Nausea ,Vomiting.
- Increased Frequency and dysuria
- Altered mental state

Classification



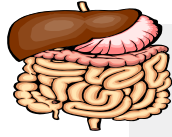
Risk factors UTI

- >Infrequent and incomplete voiding, caused by obstruction to flow ie rectocele, Kidney stones.
- >Age Male/Enlarged prostate.
- >Age /Female /Menopause.
- >Constipation.
- >Incontinence.
- >Urinary reflux.
- >Catheter. And poor catheter care.
- >Wiping from back to front
- > Sexual activity



Gastro intestinal infections

- Gastro-enteritis
- Viral Hepatitis



Sign and Symptoms gastro-enteritis

Diarrhoea, vomiting, cramping, mucous, blood, pus, fever, dehydration altered mental state
 Bloody stool with fever +/- vomiting
 Salmonella Shigella, Campylobacter not common in residential setting due to strict guidelines.
 Bloody stool without fever could be E.coli 0157
 Offensive Diarrhoea consider Cdiff



Clostridium difficile associated diarrhoea CDAD

- Clostridium difficile (C diff) is a spore forming bacteria
- Symptoms range from mild diarrhoea to pseudomembranous colitis, to toxic megacolon.
- Notifiable to public health department
- Most vulnerable – over 65s, chronic illness, frequent hospital attendees.
- Infection occurs when normal gut flora is altered by antibiotic therapy (esp. Ampicillin, Clindamycin and cephalosporins).



Norovirus

- Norovirus was first identified retrospectively in 1972 from an outbreak of non bacterial gastroenteritis in a school in Norwalk Ohio
 - It is often referred to as Winter Vomiting Bug, and sometimes referred to as a Small Round Structured Virus (SRSV), Viral Gastroenteritis and/or stomach flu.
- Symptoms are diarrhoea and or vomiting often projectile vomiting, cramps

Ask patient/relatives if any family members have had it recently also check if any staff have been off with D&V.

Epidemiological criteria
 Notifiable to public health dept and HIQA

Bristol Stool Chart	
Type 1	Separate hard lumps, like nuts (hard to pass)
Type 2	Sausage-shaped but lumpy
Type 3	Like a sausage but with cracks on its surface
Type 4	Like a sausage or snake, smooth and soft
Type 5	Soft blobs with clean-cut edges (passed easily)
Type 6	Puffy pieces with ragged edges, a mushy stool
Type 7	Watery, no solid pieces. Entirely Liquid



Hepatitis

Non infective causes Drugs, alcohol
Infective causes Hepatitis A, B,C,

- Hepatitis A

Normally between 19-52 cases reported in Ireland per year. In 2013 There was an outbreak from in Ireland 15 cases alone.

Normally associated with contaminated water and shellfish

- Hepatitis B

Acute viral hepatitis, result in chronic infection in 10% of all cases such as cirrhosis and hepatocellular ca.

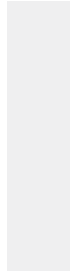
Incubation period 6-12 weeks

- Hepatitis C

Clinical illness often mild asymptomatic. Incubating period 6-7 weeks

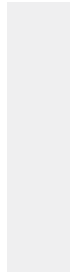
1000 new cases per year

Notifiable to Public health department



References

- Please contact me if you require reference list
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email: infectioncontrol@sivuh.ie



Thank you for listening.

Any questions?

