workbook

BodyCare

Infection Prevention and Control

HealthCo
Healthy Culture

HealthCo
Healthy Culture

Welcome

HealthCo is all about making positive health choices to the benefit of our family, our work and ourselves.

Our mission is to keep you healthier for longer.

We want you to make that commitment to yourself.

HealthCo will help you out by creating a work environment that makes it easier for you to make positive health choices. We provide a simple set of services that will optimise the investment an employer makes for the betterment of employee health. Every single staff member of your team is very important to us and we will make sure that they are provided with the right support and environment to achieve their health goals, helping them to perform and take their role to the next level.

We have a vision of a healthy culture at your company being the cornerstone that brings you into the future with confidence.

What are you waiting for, **make the commitment** today!

Many thanks,
The team at HealthCo

Follow us on Twitter www.twitter.com/healthcoculture

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PARTICIPANT WORKBOOK CONTENTS

1. Pre-course survey 04
2. The Chain of Infection 05
   a. What causes an infection?
   b. Infectious agents
   c. The chain of infection
3. Hand Hygiene 07
   a. How to wash our hands effectively?
   b. When to wash our hands?
   c. What should we wash our hands with?
4. Waste Management 09
   a. Disposable waste
   b. Blood and body fluid spills
   c. Cleaning and disinfection
   d. Laundry
   e. Alginate bags
5. Personal Protection 11
   a. Personal Protective Equipment
   b. Single use items
   c. Skin sensitivity
   d. Inoculation injuries
   e. Vaccination
6. Activity 16
7. My Health Commitment 17
8. Participant Evaluation 18

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Pre-course Survey

Overview

We want to know what your experience has been with regards to vaccinations. Good or bad, we feel it's important to have the discussion and tease out some of the facts and feelings on this most important of topics.

All information received is anonymous and used for the purposes of improving the accuracy and relevance of our message during our training.

When was the last time you have received a vaccine?

❍ Less than one year ago
❍ 1-2 years ago
❍ 3-5 years ago
❍ More than 5 years ago

Which vaccine was it?

❍ Influenza ❍ Tetanus ❍ MMR ❍ BCG
❍ Hepatitus B ❍ Other ❍ Can't remember

Did you experience any negative side effects?

❍ Yes ❍ No

If yes did you take time off work? ❍ 1 day ❍ 2-3 days ❍ Longer than 3 days

What were the symptoms/side effects?

.....

.....

.....

In a sentence, what is your own attitude/opinion on vaccination?

.....

.....

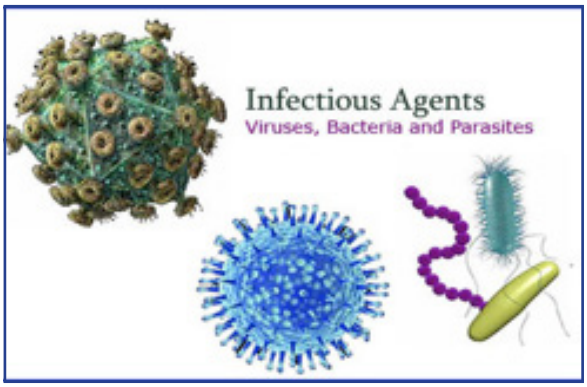
.....

What do we want to achieve?

We want to keep you healthier for longer. Through this course we'll achieve this by focusing on the infection risk within your job.

Section 1: The Chain of Infection

What causes an infection?



Ultimately it takes an infectious agent (right) to invade our body in some manner. The side effects of this invasion are what we call the symptoms. In minor cases these include sore throat, headache, swelling, rash & pain to more severe symptoms like septicaemia (blood poisoning) or swelling of the brain (brain edema).

Infectious Agents

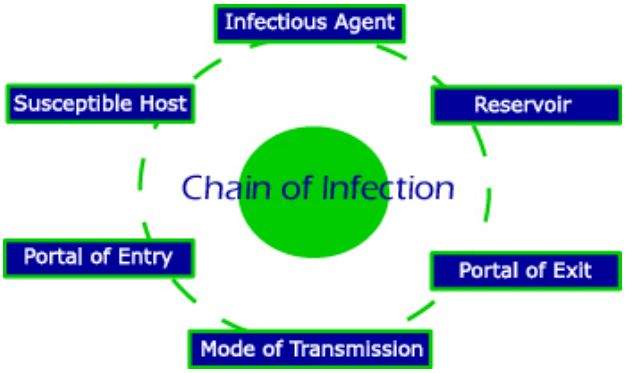
The agents that cause disease fall into five groups: viruses, bacteria, fungi, protozoa, and helminths (worms). Protozoa and worms are usually grouped together as parasites. The table below lists some of the more common infectious agents that are a substantial burden on our health service and ultimately our own health.

Most common infectious agents

Pathogen	Example	Disease
Bacteria	Streptococcus pneumoniae	Pneumonia
	Clostridium tetani	Tetanus
	Clostridium difficile	Vomiting/Diarrhoea
	MRSA	Wound Infection
	Escherichia coli	Food poisoning
		Urinary Tract Infection
Virus	Influenza	The flu
	Varicella	Chicken pox
	Ebola	Ebola
	Human Immunodeficiency Virus	HIV/Aids
Fungi	Trichophyton rubrum	Athletes foot
	Candida albicans	Thrush
Parasite	Plasmodium falciparum	Malaria
	Sarcoptes scabiei	Scabies
	Head lice	Itching/Rash

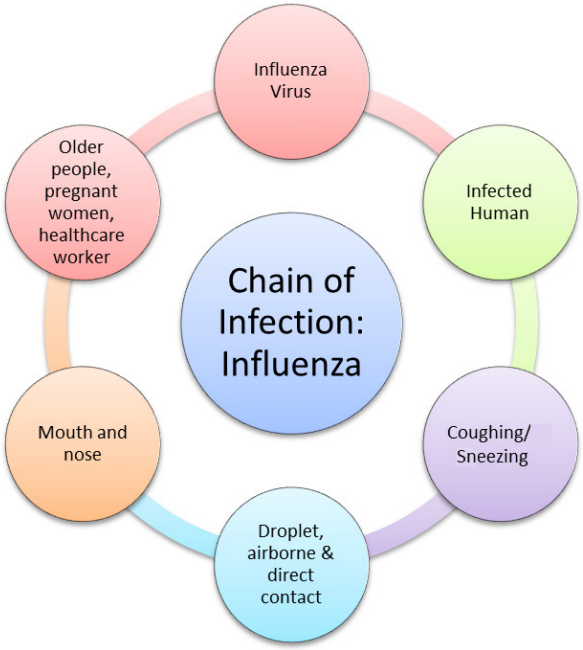
The Chain of Infection

These infectious agents spread from person to person via a pathway that we term the chain of infection (below). This involves six key steps and enables us to find ways of preventing the spread of infection. By breaking the chain at any of these six points we will prevent the spread. We must all examine our daily activities and identify what changes we can make in order to break the chain.



Example

The last influenza season in Ireland saw 1,856 hospitalisations with 84 fatalities.[1]
The chain of infection looks like this:



We can break this chain in many ways.

- Disinfection of facilities to kill the influenza virus at source
- Segregation of the infected human, medication
- Good cough etiquette (Catch it, Bin it, Kill it)
- Hand washing removes route of transmission
- Personal protective equipment blocks means of entry
- Vaccination immunises susceptible hosts

References:
1. 2015 Annual Epidiemiological Report. Health protection surveillance centre. HPSC 2016
Available at: http://www.hpsc.ie/AboutHPSC/AnnualReports/File,15956,en.pdf

Section 2: Hand Hygiene

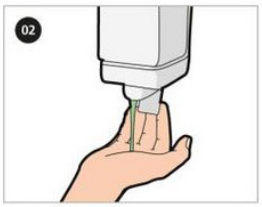
Where have your hands been??? Surprisingly there is very little peer reviewed research into the behaviour of our hands. The most recent article available however found that when in the public space, we touch surfaces at a rate of 3.3 times per hour and we also touch our face at a rate of 3.6 times per hour – much more than we wash our hands.[1] It's reasonable to assume that whilst at work we probably touch surfaces/things/people even more frequently. This makes us a significant route of transmission risk to both ourselves and to others. How do we eliminate this risk?

Wash our hands!

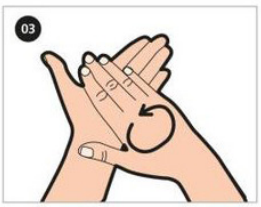
How to wash our hands effectively?

The group dedicated to developing a strategy for the control of antimicrobial resistance Ireland (SARI) have recently published an update to their guidelines for handwashing in the healthcare sector.[2] There are six key steps (#3-8 below) to ensure clean hands in an efficient timeframe of 15 seconds.

Wet hands with water

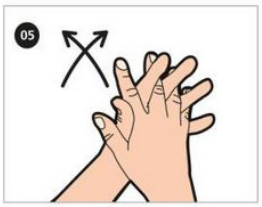


Apply enough soap to cover all hand surfaces

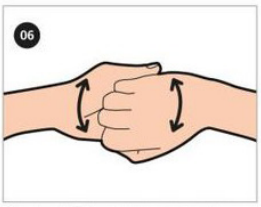


Rub hands palm to palm

Right palm over back of the left hand and left palm over back of the right hand



Palm to palm with fingers interlaced

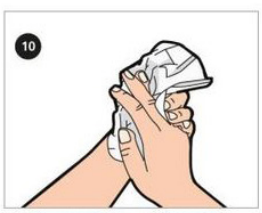


Backs of fingers to opposing palms with fingers interlocked

Rotational rubbing of left thumb clasped in right palm and vice versa

Rotational rubbing, backwards and forwards with clasped fingers of right hand in left palm and vice versa

Rinse hands with water



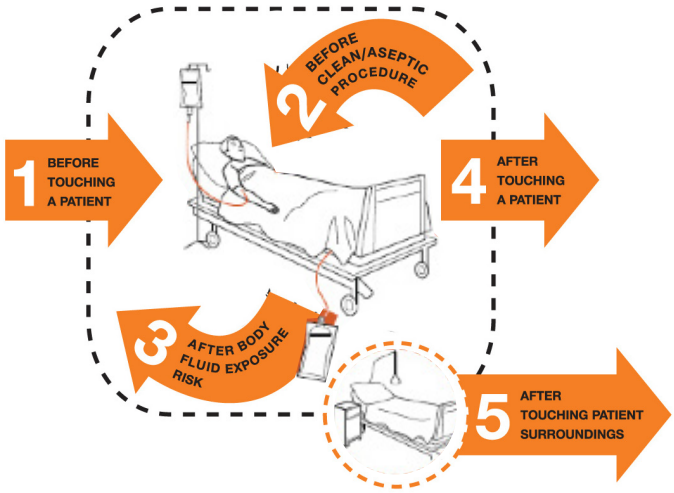
Dry hands thoroughly with a towel

When to wash our hands?

The World Health Organisation (WHO) has developed the 'five moments for hand hygiene', below. Quite simply, it defines the key moments for hand hygiene, overcoming misleading language and complicated descriptions.

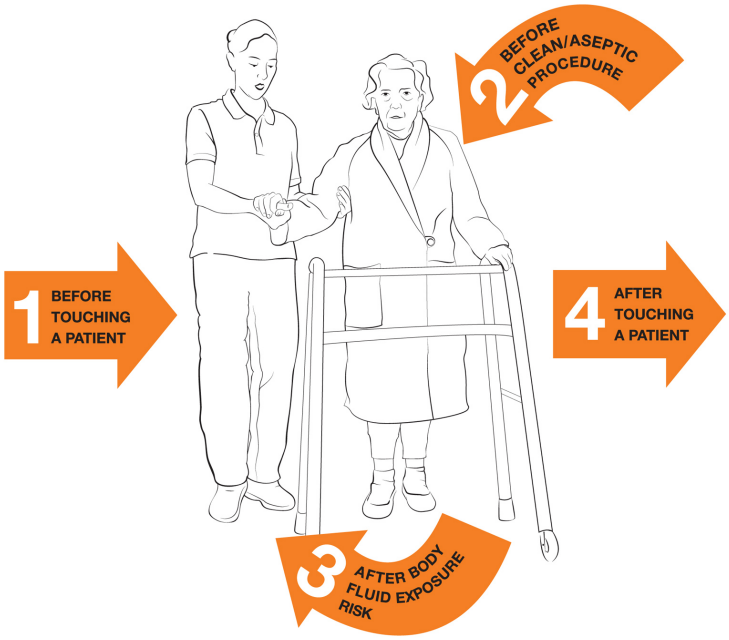
The updated guidelines also preface all five moments with the word 'immediately', indicating that we should be performing hand hygiene at the point of care. This clearly necessitates the placing of alcohol gel dispensers widely throughout a facility.

It has often been argued that long term care facilities are different to the acute care setting and that these guidelines don't naturally translate between settings. Recognising this the WHO published guidelines setting out the case for hand hygiene within outpatient and community care settings. They also reconfigured their moments posters to accommodate these changes and five moments became four moments for hand hygiene in residential care services (see below).[3]



Your Moments for Hand Hygiene

Health care in a residential home



1	BEFORE TOUCHING A PATIENT	WHEN?	Clean your hands before touching a patient.
		WHY?	To protect the patient against harmful germs carried on your hands.
2	BEFORE CLEAN/ ASEPTIC PROCEDURE	WHEN?	Clean your hands immediately before performing a clean/aseptic procedure.
		WHY?	To protect the patient against harmful germs, including the patient's own, from entering his/her body.
3	AFTER BODY FLUID EXPOSURE RISK	WHEN?	Clean your hands immediately after a procedure involving exposure risk to body fluids (and after glove removal).
		WHY?	To protect yourself and the environment from harmful patient germs.
4	AFTER TOUCHING A PATIENT	WHEN?	Clean your hands after touching the patient at the end of the encounter or when the encounter is interrupted.
		WHY?	To protect yourself and the environment from harmful patient germs.

References:

1. *Facing Ubiquitous Viruses: When Hand Washing Is Not Enough. 2013. Alonso WJ, Nascimento FC, Shapiro J, Schuck-Paim C. Clin Infect Dis. Available at: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3552529/*
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3. *Hand hygiene in outpatient and home-based care and long-term care facilities: a guide to the application of the WHO multimodal hand hygiene improvement strategy and the "My Five Moments For Hand Hygiene" approach. 2012. WHO Available at: http://apps.who.int/iris/bitstream/10665/78060/1/9789241503372_eng.pdf?ua=1*

What should we wash our hands with?

Use an alcohol hand rub for hand hygiene, except in the following situations where hands should be washed using soap and water:

- When hands are visibly soiled
- When caring for patients who are known or suspected to have Clostridium Difficile infection

Question? – Which do you use more, alcohol hand rub or soap and water?

Section 3: Waste Management

Disposable waste

Identify 6 items that you dispose of every day and classify each as either risk waste or non-risk waste below:

Risk Waste	Non-Risk Waste

Question? – How do you dispose of confidential material?

Healthcare waste must be correctly segregated and healthcare risk waste must be stored in the appropriate UN approved containers. These are typically yellow bags or bins depending on the nature of the waste. Soft items soiled with risk material are disposed of in the yellow bags whereas sharps, liquids and pharmaceutical waste are disposed of in yellow bins, each has a specific lid colour indicating which items are suitable.

Bin Lid Colour	Waste items	Example
Blue or Red	Sharps	
Yellow	Containers with body fluids	
Black	Body parts & surgical waste	
Purple	Cytotoxic waste	

Bags and bins must be sealed when two thirds full or full to the fill line. Bags should be tagged according to local policy and bins closed securely.
Healthcare waste must be stored in a secure area, appropriately signed, with access limited to staff.
There must be arrangements in place to deal with spillages of waste.

Blood and body fluid spills

From time to time staff will need to clean up body fluid spillages such as blood, urine, faeces and vomit. In each case we should follow local policy and procedures to render the area clean and safe. This can involve:

- Putting signs out to warn of wet floor hazard.
- Putting on personal protective equipment (PPE), gloves, aprons, facemasks and/or eyewear.
- Mopping up the waste with paper towels or spill kits, with appropriate disposal.
- Disinfecting the area, removal of PPE and handwashing.

Cleaning and Disinfection

Cleaning ensures that an area is free from the organic and inorganic matter that harbours infectious agents. It is generally enough to ensure households are a healthy place to live but in the healthcare setting we may also have to disinfect surfaces after we have first cleaned them. This can be completed by using an antiseptic solution or antiseptic wipes.

It is important to follow local policy and manufacturer guidelines when using disinfecting agents. This ensures that the area is decontaminated appropriately without leaving residues as well as ensuring your own safety. Make sure you follow manufacturer's instructions each time you use a disinfecting product.

Laundry

Proper laundry procedures will help ensure that the chain of infection is broken by ensuring that reservoirs of infectious agent do not cross contaminate uninfected linen/clothes. This is achieved through segregation of linen in the manner outlined below.

Category	Description
Used linen (bedding, towels etc)	Linen that is used but not contaminated with urine, faeces, blood, vomit, sputum or any other bodily fluid.
Contaminated or infected linen and clothing	Linen that is contaminated with urine, faeces, blood, vomit, sputum or any other bodily fluid or from a person with a known infectious condition e.g. CDiff

When changing beds linen should be handled with care avoiding creating dust and contacting your clothes. The linen should be kept off the floor and placed in a laundry trolley at the point of use. Gloves do not normally need to be used when changing bed linen other than when the linen is soiled or the patient has a known infection.

Alginate bags

These are used to prevent the cross contamination of soiled and/or infected linen with non-infected linen. All contaminated linen should be placed in the alginate bag and placed in a red laundry bag. The alginate bag is placed into the washing machine and dissolves or opens through the wash cycle.
Segregation of clothes may also be part of your organisation's normal operating procedures, make sure you know what the procedures are in your organisation.

Section 4: Personal Protection

Personal Protective Equipment

This includes gloves, goggles, aprons, overshoes, facemasks and gowns.

PPE is used to protect staff from risks associated with exposure to infectious agents during the course of their work. This is commonly as a result of exposure to body fluids and the use of gloves very often is a suitable protection. In cases where body fluids may splash an apron/gown and goggles are added. If the route of transmission is droplet or airborne then a suitable mask will also be necessary.

Single use items

In each case the item of PPE is a single use item, designated:

This means that PPE must be disposed of after the task has been completed.
For glove use specifically this means:

- Gloves should be discarded between care activities for different patients and between different care activities for the same patient.
- Gloves should only be used where there is an identified body fluid exposure risk.
- Several gloves must not be worn at the same time.
- Hands must be washed before putting gloves on and after the removal of gloves.
- Gloves are not a substitute for hand hygiene.

Skin sensitivity

All of the aforementioned precautions can take their toll, particularly on the skin of our hands. If you are experiencing dry, cracked skin, talk to your supervisor who can give you guidelines or refer you to occupational healthcare.

Some helpful changes can be:

- Use non latex gloves
- Avoid overuse of gloves in general
- Use hand creams available at work
- Use hand cream at home as routine, after getting up and before going to bed
- Report any ongoing difficulty to your supervisor

Inoculation injuries

The Health Protection Surveillance Centre (HPSC) published emergency medical injury guidelines to clarify our response in case of exposure to possible blood borne virus.[1]

Exposure incidents can include needlestick, sharps, bite, splash or sexual. Initial wound management includes encouraging the site to bleed, wash don't scrub and cover with a waterproof plaster or dressing. The injury should be reported to your supervisor who can next assess how significant the exposure was. This involves an assessment of the materials the staff member was exposed to and the source of these materials

Vaccination

Arguably the single greatest advance in medical science was the discovery of the vaccination by Edward Jenner in the 18th century. This led to the eradication of smallpox – responsible for between 300 and 500 million deaths during the 20th century. Despite their incalculable success general mistrust of vaccines has always existed; check the artist's representation of the hysteria that greeted Jenner early on.

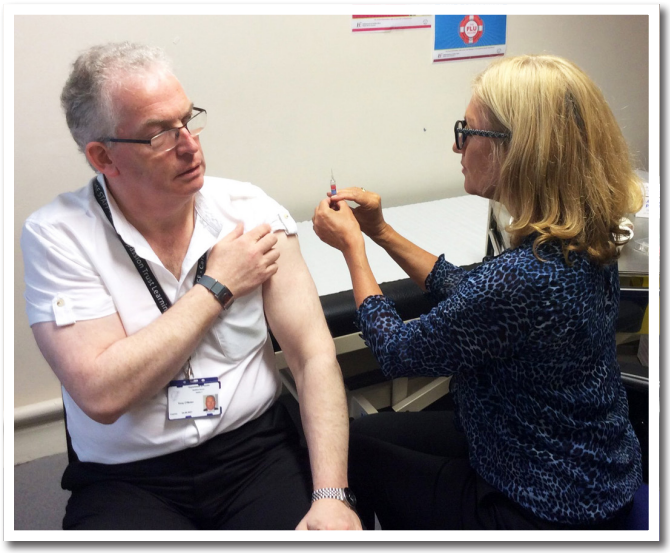
Vaccines work by priming your body's lymphocytes (left) to immediately recognise the invading virus. The lymphocytes immediately recognise, engulf and kill the invading virus and dump the waste via your lymphatic system.

So cutting to the chase, the flu or influenza virus. This virus peaks every year in January causing up on 100 fatalities, several thousand hospitalisations and any multiple of days off work and school. It's a 'slippery' virus that changes its antigens season after season thus rendering each years vaccine redundant for the following year. Hence we have to re-immunise every year. The most susceptible hosts are older people and pregnant women, with uptake rates high amongst the elderly.

However uptake rates are chronically low amongst healthcare staff in Ireland 30% so far this flu season (2016-2017) and especially low amongst those staff who complete the majority of frontline work, 24% Nursing.[2]

Now whereas evidence shows that all workplaces (offices, factory etc.) would not benefit from vaccination programs for staff, healthcare facilities have experienced a significant decrease in lost working hours as a result of high uptake rates amongst staff. Even more significant is the likelihood that an improved uptake would decrease mortality rates amongst patients of these organisations.[3]

Common reasons for not getting the vaccine include a perceived lack of personal benefit and the perceived likelihood of contracting the flu as a result of the vaccine. In terms of the likelihood of negative side effects, studies demonstrate only mild side effects result in some cases after vaccination. That said each organisation can do more to follow up on the experience of their own staff with each vaccination round and communicate the results (good and bad) back to the whole staff. Indeed the leaders within the organisation must demonstrate leadership (like Tony O'Brien, Director General, HSE pictured right) and make a point of being seen to receive their vaccinations.



To conclude, it may be better to look at this from another angle. As a healthcare worker you feel proud when you make your patient smile, proud when help them get better after being ill. You should feel just as proud when you receive your flu vaccination, full in the knowledge that you are continuing to save the lives of those in your care.

Be proud – Get the vaccine

We suggest that you use the health commitment to plot your pathway to getting the flu vaccine every year. The beneficial effects on our wellbeing of doing something to enhance the wellbeing of someone else are well documented.[4] Being compassionate will help you live longer and happier.

References

1. *EMI Toolkit. Guidelines for the Emergency Management of Injuries and Post-exposure Prophylaxis. Health Protection Surveillance Centre. Available at: http://www.hpsc.ie/A-Z/EMIToolkit/*
2. *2016-2017 Mid-season Influenza Vaccine Uptake in HSE- funded Hospitals and Long Term Care Facilities in Ireland. HSE-HPSC. Available at: http://www.hpsc.ie/A-Z/Respiratory/Influenza/SeasonalInfluenza/InfluenzaandHealthcareWorkers/HCWInfluenzaVaccineUptakeReports/File,15948,en.pdf*
3. *Randomized, placebo-controlled double blind study on the efficacy of influenza immunisation on absenteeism of health care workers. 1999. The Paediatric Infectious Disease Journal. Available at: https://www.ncbi.nlm.nih.gov/pubmed/10493337*
4. *Beneficial effects of human altruism. 2011. Lozada M, D'Adamo P, Fuentes MA. J Theor Biol. Available at: https://www.ncbi.nlm.nih.gov/pubmed/21872608*

Key information points

Health Protection Surveillance Centre – www.hpsc.ie

Health Information Quality Authority – www.hiqa.ie

Tropical Medical Bureau – www.tmb.ie

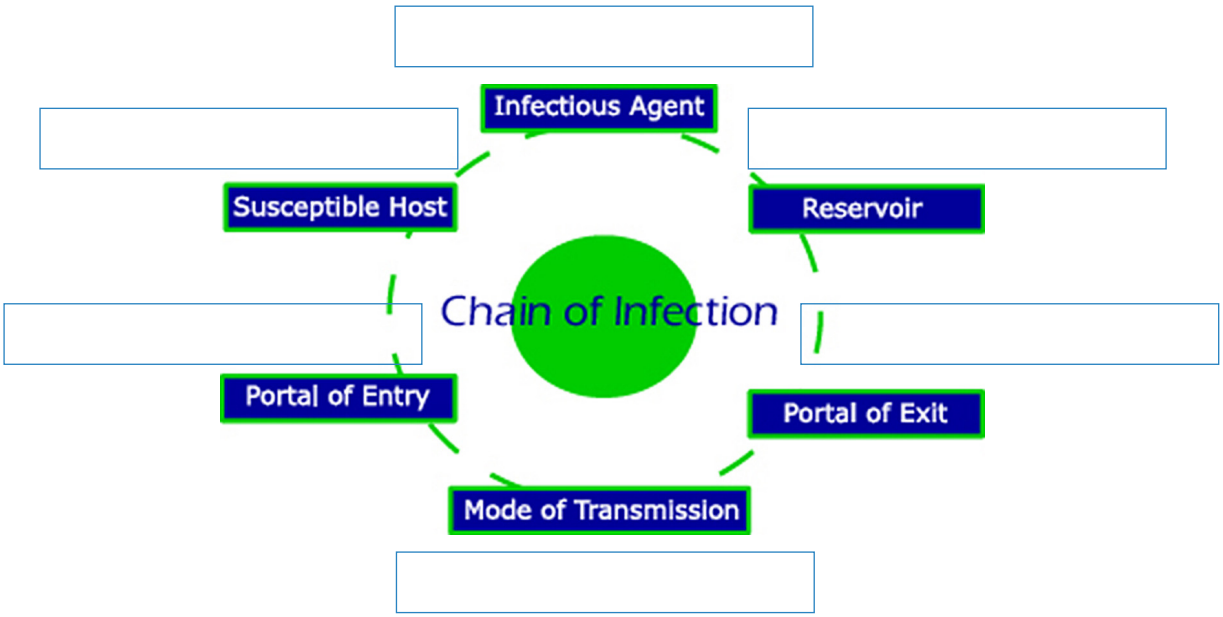
World Health Organization – www.who.int

Centre for Disease Control and Prevention – www.cdc.gov

Activity

Name: Date:

- For the infectious agent that you identified, write up its chain of infection and identify two measures that you could take in order to break the chain.



- My role in breaking this chain of infection at work is:

1.

2.

- The five moments for hand hygiene are and describe one example of each in your daily activities:

Moment	Example
1	
2	
3	
4	
5	

- Gloves should be used where there is a .... exposure risk

- Can you list two disinfecting agents in your place of work?

3.

4.

• Write two items in each box that you would segregate into the red and white linen bags indicated.

• What is an alginate bag?

.....

• I do not need to wash my hands before putting on gloves

❍ True ❍ False

• Draw the symbol for a single use item in the box to the right

• High uptake of the influenza vaccine amongst healthcare workers saves lives

❍ True ❍ False

Signed: .....

Completed Date: ..... Review Date: .....

My health commitment

I would like to .....

.....

..... to improve my health.

Design element:	Behaviour to change:
Priming	
Default	
Commitment	

Priming: Like a suggestion, priming is a purposeful arrangement of your environment that helps initiate a desired behaviour. For example by setting out our exercise clothing in our wardrobe we are more likely to actually go exercise than if we had to choose what to wear immediately pre-exercise or by introducing soft light in a room we are more likely to be relaxed when in that space.

Default: We are much more likely to go with the flow, leaving things as they are so to speak. By actively setting up some positive defaults in your lifestyle, you will aid your achievement of some longer term goals. For example a common default is to immediately get changed into more casual clothing after returning home from work. A more pre-conceived default is to set up a standing order to transfer wages out of your bank account into a savings account on pay day, rather than having to perform this task manually on each pay day.

Commitments: Simply put we are more likely to do something if we have committed to it. To make commitments more cast iron we should write them down or make them public. A word of note: begin with bite sized commitments, making many small successes en route to your bigger goal. For example this could mean 'I am not going to have a cigarette today' on the way to 'I am going to give up smoking'.

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Participant Evaluation

We hope that you have found today's program beneficial and what is more we would be really pleased if it assists you in achieving your health goals. The following brief questions will aid with the summation of today's session and will assist us in developing our programs to better suits your health needs.

What particular part of today's course did you feel was of most benefit to you?

.....

.....

.....

My blood pressure reading is ..... / .....
My waist circumference: .....
My height: .....

Email address so that we can email you an evaluation of the above parameters:

.....

How do you rate today's session? (please circle)
1☆ 2☆ 3☆ 4☆ 5☆

Any other comments:

.....

.....

.....

.....

.....

.....

MY NOTES

The staff of HealthCo thank you for your participation in our programme. If we can be of any other assistance to you, your organisation, or your colleagues, please do not hesitate to contact our office.

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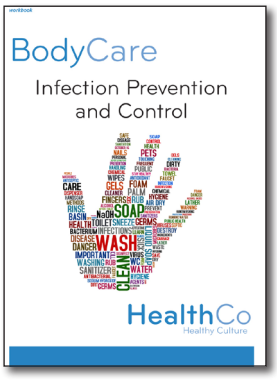

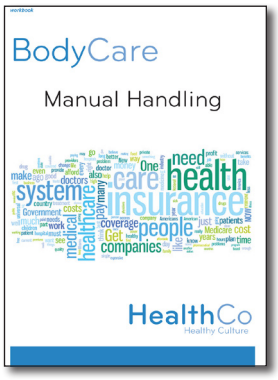

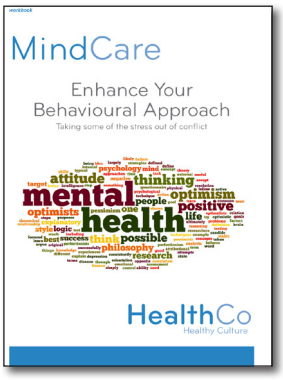

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