


Hand hygien



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Introduction


FACT:

Hand Hygiene is the single most important measure for preventing the spread of infection

IT IS ESSENTIAL FOR PATIENT SAFETY

Very important issue .. very efficient in controlling transmission of infectious diseases .
the World Health Organization..(WHO) ... designed a day for hand hygiene ..
That's mean it is very important ..very important to whom ?? To everyone!! #Especially to doctor , nurse and other paramedics (health care professionals)
it can increase nosocomial infection " it's an important way to control nosocomial infection "

paramedics = مسعفين

The “who, what, where, when, how and why” of Hand Hygiene

When we answer these questions we will know the importance of hand hygiene .

What is Hand Hygiene?



Hand Hygiene includes cleaning hands with soap and water or alcohol based hand rub in order to remove germs

washing hand in warm tap water with good friction can move resident normal flora .

Alcohol base we use it on clean hand ..

Ex: if the person works with infectious material (blood , proteinous material , fecal material , etc..) he must washing up his hand before using alcohol

Who should practice Hand Hygiene?



Hand hygiene is important not only for healthcare providers; everyone needs to be practicing appropriate and effective hand hygiene regardless of work setting.

there is a specific criteria for hand hygiene all health care providers must follow

Where should you perform Hand Hygiene?

- Busy health care providers need access to hand hygiene products where patient or patient environment contact is taking place.
- Hand hygiene is important in all work settings, including Acute Care, Long Term Care Facilities, Community and Corporate sites.
- Providing alcohol-based hand rub at the point of care (within arm's reach) is an important system support to improve hand hygiene.
- This enables health care providers to quickly and easily fulfill the 4 Moments for Hand Hygiene. **in all places with direct contact between doctors and patients . doctors should practise proper hand hygien**

Points of Care



The patient



The Health Care provider



Care involving contact

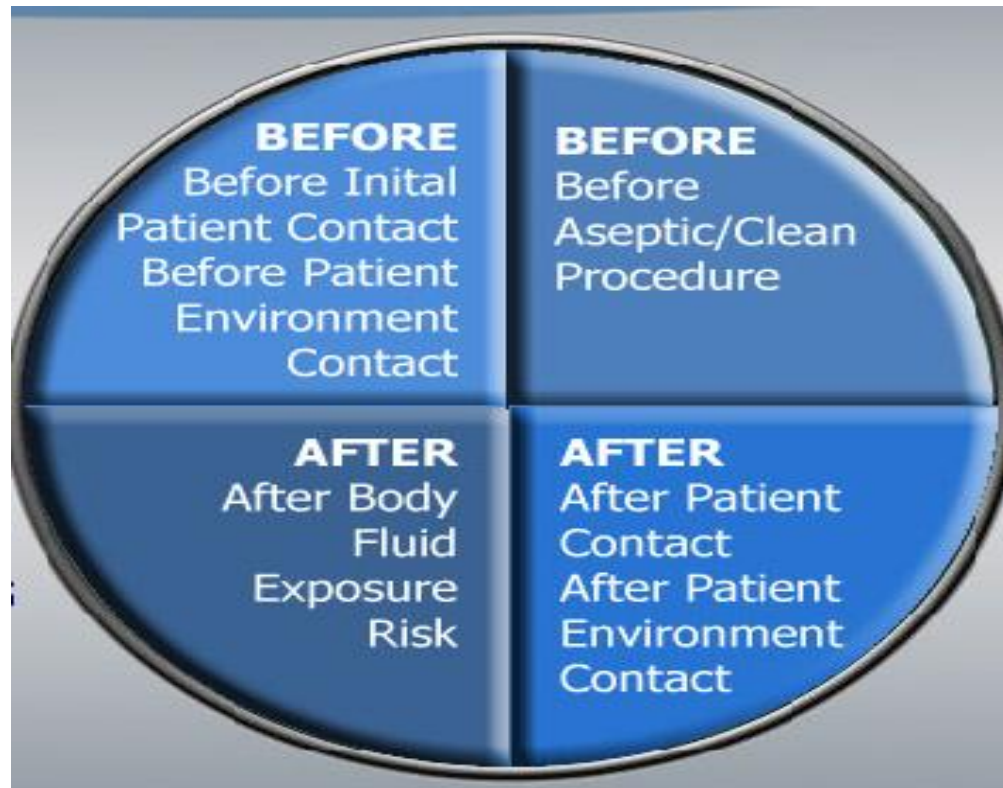
Why do we need to learn about Hand Hygiene?

briefly .. to control infectious diseases and (it's the simplest method) to decrease nosocomial infections

- Hand hygiene is the most important way to prevent the spread of germs.
- Hand hygiene helps keep you healthy by reducing the number of germs on your hands and helps reduce the spread of germs to your family, friends, coworkers, patients, residents or clients.
- Using appropriate hand hygiene prevents contamination of the patient's, client's, or resident's environment.

When do you perform Hand Hygiene

as a physicians we must wash our hand **PROPERLY** ..
before an after



Before contact with patient or patient environment



Before aseptic/clean procedure



Handling dressings or touching open wounds



Performing invasive procedures

After body fluid exposure



Contact with blood,
bodily fluids, non-
intact skin or mucous
membranes,



Removal of gloves



Contact with
contaminated items

After contact with a patient



Shaking hands



Transferring



Making someone
comfortable in bed

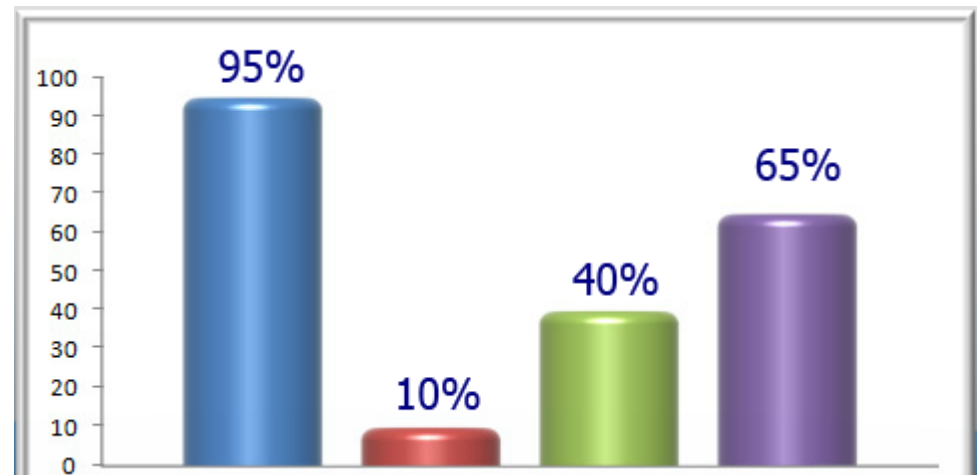
How do we measure up when it comes to hand hygiene?

Most healthcare providers believe they're already practicing appropriate and effective hand hygiene.

Take a guess at what the Hand Hygiene compliance is among healthcare providers...

health care providers were asked if they practise hand hygiene properly 95% said that they practise proper hand hygiene

in real only 40% practice hand wash properly .. this small percent for physician practising proper hand hygien who are always with direct contact with patients



Why carry out hand hygiene?:

- To render hands socially clean and to remove transient micro-organisms.

NB: Routine hand hygiene removes most transient micro-organisms from soiled hands.

ايدينا مقسمه لمناطق معينه كل منطقه الها استخدام شائع فيها

Ex: finger tip --- elevator
The common use of hand's parts determine the normal flora species in every single site of our hand

we have to wash our hands after before wearing gloves and after taking them off

-  Elevator button
-  Computer keyboard
-  Door handle from the lobby
-  Card swipe at entrance
-  Dodgy bagel from co-worker
-  Lord knows what



another ex : palm --- door nops #most dangerous specially when we use bathrooms door full with microbes ..!!and it represent a Wide area of hand

Ignaz Philip Semmelweis (1818 – 1865)

اهم طريقة لتعرف الواقع الي انت فيه و تطور نفسك البحث (research)

he made a research about the mortality rate caused by (nosocomial infection) without practising hand wash and compare it

with the rate after practising hand wash.. he found that the mortality rates decreased significantly after practising hand wash

- Hungarian born doctor
- Worked in Vienna
- Mortality rate in Doctor led ward 3 times higher than Midwife led ward
- Doctors worked in autopsy room, then delivered women afterwards
- Semmelweis identified link in 1846 & introduced chlorinated lime for hand washing
- Mortality rate fell dramatically

gloves for doctors is a must



طبعاً في تلك الأيام كان يعتبر بحث علمي رصين قوي معترف فيه

What are your hands carrying?



Resident Flora:

- Deep seated
- Difficult to remove
- Part of body's natural defence mechanism
- Associated with infection following surgery/invasive procedures.

resident flora -- must be found on our hands because it is a part of defense mechanism.

when surgeons don't practice hand hygien *properly* resident flora will become One of the reasons for postoperative infections

Transient Flora:

- Superficial
- Transferred with ease to and from hands
- Important cause of cross infection
- Easily removed with good hand hygiene.

Transient-- usually it contains pathogens and transmitted from person to another (hand by hand) ... consider as source of risk .

Hand Hygiene includes:

as a physicians we must practice both routine hand washing (to protect ourselves an our families from pathogens) and

- Routine hand washing

routine -- practice in community routinely
but some people have paranoia ((wash their hand in excessive way))
this attitude is not good because in this way we kill all normal flora on
our hand that may lead to a serious problem .. ##specialy
using alcohol base and antibacterial gel that kill 99.9 % of m.o

paranoia-- الوسواس . الشك

- Surgical hand 'scrub'

scrub* surgical * (here we need paranoia) to m.o transmission to thepatient

- Use of alcohol rubs/gels.

- alcohol gels --- we must use it on clean hand .. before enter the
patient rooms and after exiting . To reduce nosocomial
infection and to protect the community



NOTHING BELOW THE ELBOWS (NBE)

يجب ان تكون اليد خالية من الاكسسوارات من المرفق وحتى الاصابع

- In line with national guidance (DoH, Sept 2007), SUHT has chosen to adopt a “Nothing Below the Elbows” policy for all staff working in the clinical environment
- These requirements apply even if the staff member will not be having direct clinical contact with a patient, as hand contamination & the need for hand hygiene occurs due to contact with the environment & equipment, as well as with patients.

you have to take of your personal clothes .

لبس الي بخدمك و بريحك مدامك وهبت نفسك للطب رح تتخلي عن كل شي حتى الرفاهية هاي

- On arrival in the clinical environment
 - ALL staff (clinical & non-clinical), volunteers & visiting staff must remove jackets/cardigans/jumpers/coats & hang them up in a designated secure area for the ward/dept they are in
 - Wristwatches, bracelets (except Kara) & all rings (except for a PLAIN wedding band) must be removed
 - Long sleeves must be rolled up to above the elbow
 - Hands must then be decontaminated with alcohol hand rub/gel or soap & water following the posters on display in the clinical areas.

- Any staff member with any portion of their forearm, wrist and/or hand in a bandage, splint, plaster cast and/or sling of any description cannot be permitted to work in the clinical environment as hand contamination and the need for hand hygiene occurs due to contact with the environment and equipment, as well as with patients.

Fingernails



- Fingernails
 - Short
 - Clean
 - Free from nail varnish
 - Free from nail art
 - Free from nail extensions
 - Free from artificial fingernails
- Harbour micro organisms that are not easily removed during hand hygiene (Larson, 1989)
- Documented evidence of link between artificial nails and a Pseudomonas outbreak in a neonatal intensive care unit in the USA

short nails to provide high level of hygiene

Jewellery



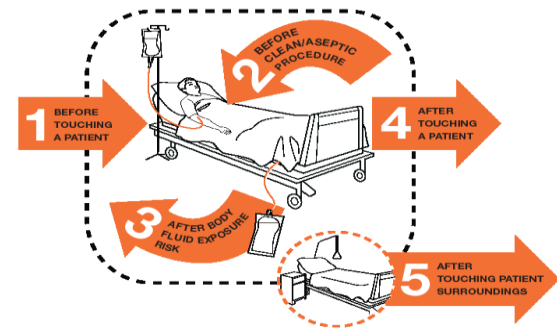
- Jewellery worn on the hands & wrists
 - become contaminated during work activities
 - Prevent thorough hand hygiene procedures
- (Larson, 1985)

من جانبين لحماية الطبيب لنفسه و حماية المرضى الي بتعامل معهم حتى ما يكون وسيلة نقل لل
pathognes

WHO “My five (KEY) moments for hand hygiene”

1. Before touching a patient
2. Before clean/aseptic procedure
3. After body fluid exposure risk
4. After touching a patient
5. After touching patient surroundings

Your 5 Moments for Hand Hygiene



1	BEFORE TOUCHING A PATIENT	WHEN? WHY?	Clean your hands before touching a patient when approaching his/her. To protect the patient against harmful germs carried on your hands.
2	BEFORE CLEAN/ASEPTIC PROCEDURE	WHEN? WHY?	Clean your hands immediately before performing a clean/aseptic procedure. To protect the patient against harmful germs, including the patient's own, from entering his/her body.
3	AFTER BODY FLUID EXPOSURE RISK	WHEN? WHY?	Clean your hands immediately after an exposure risk to body fluids (and after glove removal). To protect yourself and the health-care environment from harmful patient germs.
4	AFTER TOUCHING A PATIENT	WHEN? WHY?	Clean your hands after touching a patient and her/his immediate surroundings, when leaving the patient's side. To protect yourself and the health-care environment from harmful patient germs.
5	AFTER TOUCHING PATIENT SURROUNDINGS	WHEN? WHY?	Clean your hands after touching any object or furniture in the patient's immediate surroundings, when leaving – even if the patient has not been touched. To protect yourself and the health-care environment from harmful patient germs.



World Health Organization

Patient Safety
A World Alliance for Safer Health Care

SAVE LIVES
Clean Your Hands

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May 2009

Additional Moments for Hand Hygiene



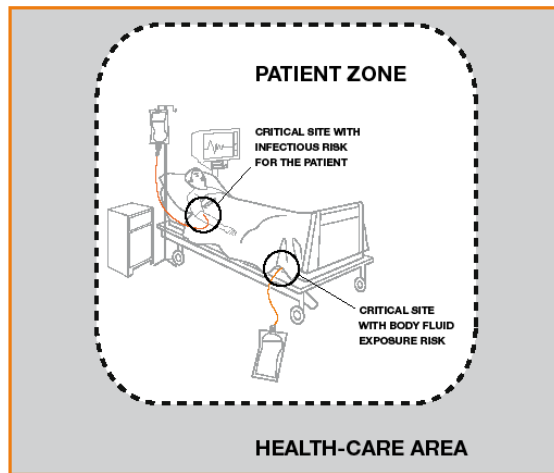
- Before commencing work/after leaving work area
- Before preparing or eating food
- Before handling medicines
- Before wearing & after removing gloves*
- After handling contaminated laundry & waste
- After using the toilet
- After contact with patients in isolation
- After cleaning equipment or the environment

Health-care & Patient Zones

WHO GUIDELINES ON HAND HYGIENE IN HEALTH CARE

PART I. REVIEW OF SCIENTIFIC DATA RELATED TO HAND HYGIENE

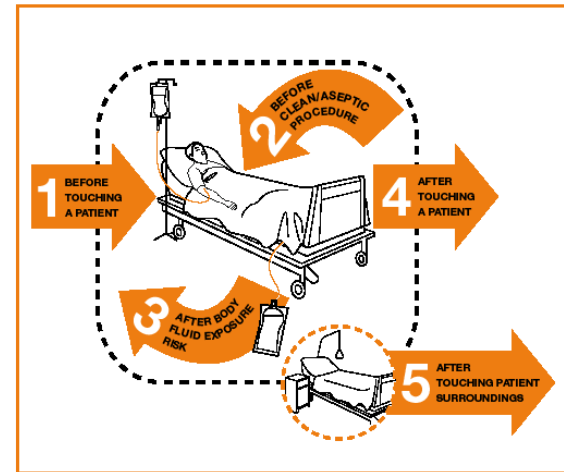
Figure L21.5a
Unfitted visuals for "My five moments for hand hygiene"



The patient zone is defined as the patient's intact skin and his/her immediate surroundings colonized by the patient flora and the health-care area as containing all other surfaces.
Symbols for critical sites with infectious risk for the patient and critical sites with body fluid exposure risk, two critical sites for hand hygiene within the patient zone (Figure L21.5a).
Reprinted from Sax, 2007 with permission from Elsevier.

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Figure L21.5b
Unfitted visuals for "My five moments for hand hygiene"



The patient zone, health-care area, and critical sites with inserted time-space representation of "My five moments for hand hygiene" (Figure L21.5b).
Reprinted from Sax, 2007 with permission from Elsevier.

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Choice of cleansing agent.



Risk Assessment:

- Likelihood that micro-organisms have been acquired or transmitted.
- Whether the hands are visibly soiled.
- What procedure is about to take place.
- Wash hands with soap & water following contact with *Clostridium difficile* diarrhoea/infective diarrhoea.

Alcohol rubs/gels



- Use on visibly clean hands only
- Rub into hands using same technique as for hand washing
- Continue rubbing until dry (emollient will condition hands).
- Not suitable for use following contact with *Clostridium difficile* or suspected infectious diarrhoea.

Routine Hand Washing.



Duration

- Routine hand wash = 40 – 60 seconds.

Technique

- Wash systematically, rubbing all parts of hands and wrists with soap and water – careful to include areas of hands that are most frequently missed.

- **Minimum duration is 15 seconds**

one minute it's enough time to dispose the microbes.



Technique



- palm to palm
- backs of hands
- interdigital spaces
- fingertips
- thumbs and wrists
- nails

HAND CLEANING TECHNIQUES

How to handwash?

WITH SOAP AND WATER



Wet hands with water



Apply enough soap to cover all hand surfaces



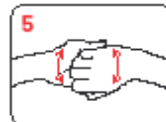
Rub hands palm to palm



Rub back of each hand with the palm of other hand with fingers interlaced



Rub palm to palm with fingers interlaced



Rub with backs of fingers to opposing palms with fingers interlaced



Rub each thumb clasped in opposite hand using rotational movement



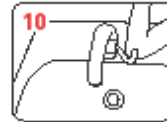
Rub tips of fingers in opposite palm in a circular motion



Rub each wrist with opposite hand



Rinse hands with water



Use elbow to turn off tap



Dry thoroughly with a single-use towel



Your hands are now safe



40-60 sec

www.npsa.nhs.uk/cleanyourhands

Adapted from World Health Organization *Guidelines on Hand Hygiene in Health Care* TW1/09


cleanyourhands
campaign

Areas most frequently missed:

protozoal.. fungus ..maybe found under nails
ف بنحط الصابون بالكف و بنفرك الاضافر فيه



- Webs of fingers
- Thumbs
- Palms
- Nails
- Backs of fingers & hands
- Wrists

Drying:



- CRUCIAL – micro-organisms thrive in a warm, moist environment
- Use paper hand towels
- When you dry your hands:
 - Work from fingertips to wrists
 - Dispose of used towel correctly (foot operated bin)
 - Repeat until both hands are completely dry.

مهم جدا حتى ما نخلي البيئة مناسبة للنمو الميكروبات

Now our big problem in microbiology is drug resistant .

The research found that most resistant microbes move between population by hand .

Tips:



- Remove jewellery, roll up sleeves & remove wrist watches (should already be compliant with NBE).
- Always use running water at a comfortable temperature
- Wet hands thoroughly before applying any soap (forms a protective barrier)
- Use enough soap to get a visible lather

Tips:



MAKE SURE THAT YOU:

- Clean all parts of both hands
- Pay attention to thumbs, fingertips, palms.
- Clean and dry beneath wedding rings & Kara if worn
- Pay equal attention to dominant and non-dominant hands.

Unacceptable Jewellery



- Rings other than a plain wedding band
 - Engagement rings
 - Eternity rings
- Bracelets other than a Kara
 - Medic-Alert (may be worn as necklace or anklet or attached to uniform, but not on the wrist)
 - Charity bracelets
 - Friendship bands
- Wrist Watches

- Rinse your hands thoroughly under running water to ensure that all micro-organisms and soap are washed away.
- Leaving soap on your hands or failing to dry properly will make them sore.
- The only time you should use soap & water followed by alcohol hand gel, is when you are about to don a pair of sterile gloves prior to performing a (non-operative) aseptic technique.

سيروا إلى أحلامكم عرجا ومكاسير، ف إنَّ إنتظارَ الرخاء بسلامة
Best wishes