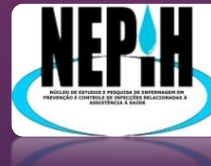
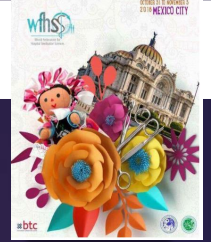




MOMENTS FOR HAND HYGIENE IN CENTRAL STERILE SERVICES DEPARTMENT

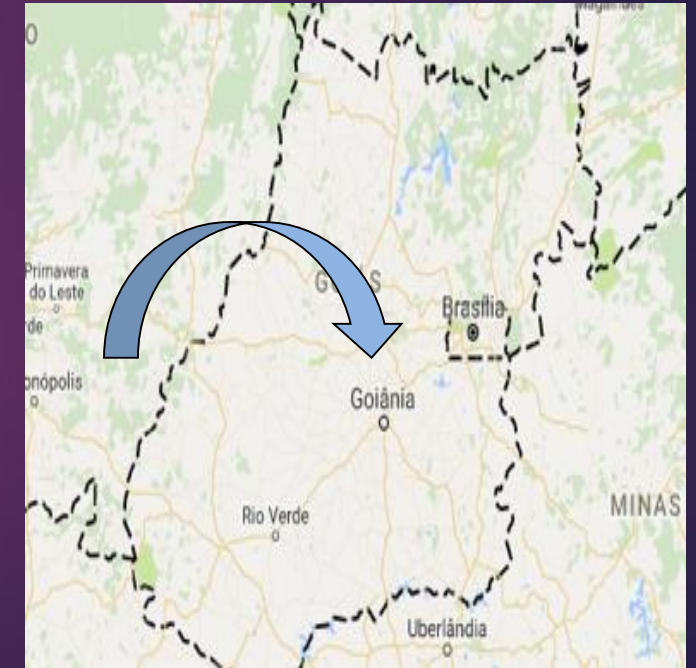
Dra Anaclara Ferreira Veiga Tipple



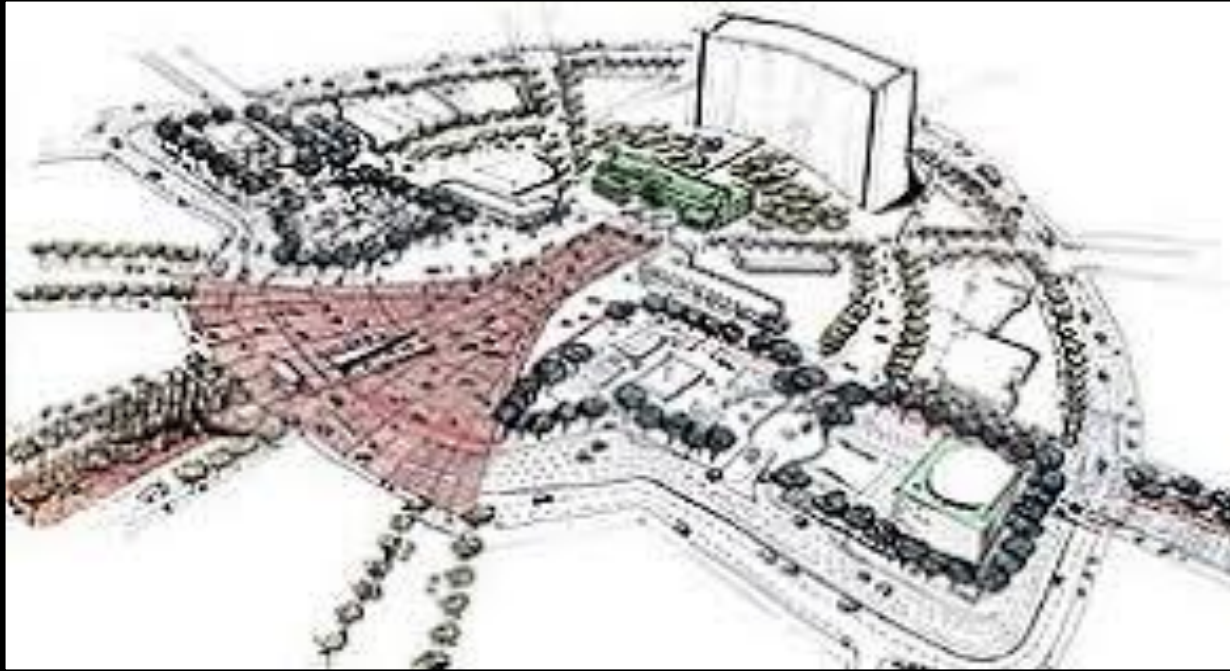
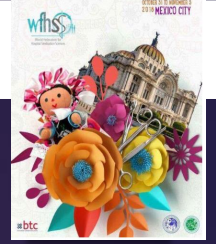


Goiânia - Goiás - Brazil

- Goiás State capital
- 1.500 people
- 11th most populated in Brasil
- 85 years



Planned city - 1933









FEDERAL UNIVERSITY OF GOIÁS

Data from 2018

Graduation courses – 149
Enrolled: 28.699

***Stricto sensu* courses**

Master: 81 - 4342
Doctorate: 42 – 2288





News from Set 26th, 2018 - UFG





36 universities of Brazil enter to the highest educational ranking of the world

CARREIRA - VOCÊ S/A

36 universidades do Brasil entraram no maior ranking educacional do mundo

Ranking dos mais prestigiados do mundo, publicado pela Times Higher Education traz uma boa notícia e duas ruins para as universidades brasileiras

Por Camila Pati

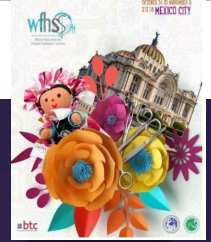
© 26 set 2018, 14h42 - Publicado em 26 set 2018, 10h01

New

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Faculty of Nursing – Federal University of Goiás

MOMENTS FOR HAND HYGIENE IN CENTRAL STERILE SERVICES DEPARTMENT



The role of hands as a vehicle for cross contamination is well known ...



Hands hygiene → reduction of infection rate





**CSSD
Support
Department**



**Processing of
Reusable Medical
Devices (RMD)**



**Infection
Prevention**



MODEL THEORIC OF BACTERIAL DEATH

D Value Min	Viable bacteria at the beginning of a new D value	Dead bacteria at each D value	Survival bacteria	Logarithm of survival
1th	1.000.000	90%=900.000	100.000	6
2th	100.000	90%=90.000	10.000	5
3th	10.000	90%=9.000	1.000	4
4th	1.000	90%=900	100	3
5th	100	90%=90	10	2
6th	10	90%=9	1	1
7th	1	90%=0,9	0,1	0
8th	0,1	90%=0,09	0,01	-1
9th	0,01	90%=0,009	0,001	-2
10th	0,001	90%=0,0009	0,0001	-3
11th	0,0001	90%=0,00009	0,00001	-4
12th	0,00001	90%=0,000009	0,000001	-5
13th	0,000001	90%=0,0000009	0,0000001	-6

(Graham. 1997)



IN 2010...

11th WORLD STERILIZATION CONFERENCE AND 7TH INTERNATIONAL SYMPOSIUM OF STERILIZATION AND HOSPITAL INFECTION CONTROL. SÃO PAULO-SP. 2010.

MENDONÇA, Katiane Martins ; **TIPPLE, AFV**; REZENDE, F R; MELO, DS; NEVES, HCC. **HAND HYGIENE IN CENTRAL STERILE SERVICE DEPARTMENT: LITERATURE REVIEW.**

Decs: : “equipment reuse”; “handwashing”; “sterilization”; “central supply unit”

10 studies

None had the aim of assessing HH in the context of CSSD



AIM

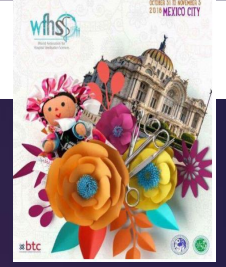
To evaluate the adherence to hand hygiene by workers of a CSSD.

To identify opportunities for hand hygiene by workers of a CSSD.



METHODS

- ▶ **Type of study: descriptive, cross sectional**
- ▶ **Place:** CSSD of a large teaching hospital – Goiânia, GO
- ▶ **Population:**
 - Workers of a CSSD
 - Resources and material available for HH



METHODS

► Inclusion criteria:

- Be a worker or trainee
- Perform operational steps of the RMD processing
- Morning and afternoon shift; working days

► Exclusion criteria:

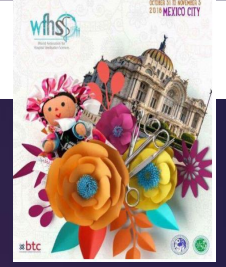
- Be in work leave or holidays
- Work most on weekend and night shift
- Work in the chemical disinfection department



METHODS

- ▶ **Data collection**
- ▶ ***Check list:*** observation
- ▶ **Questionnaire:** interview
- ▶ According to the nacional and international recommendation for HH and RMD processing
- ▶ Evaluated by 5 experts in the field
- ▶ Pilot test: before data collection

(BOYCE; PITTET, 2002; ANVISA, 2007; ANVISA, 2009; WHO, 2006; SOBECC, 2009; WHO, 2009; WHO, 2012)



METHODS

Data collection:

- ▶ From July to November 2012
- ▶ The observation aim was not clearly explained to the workers
- ▶ Non-participant, direct observation
- ▶ Morning and afternoon shift - 6 hours - 3x/each shift
- ▶ 5 sectors of CSSD
- ▶ 6 members of the team
- ▶ **Contaminated and dedicated areas:** 1 researcher
- ▶ **Clean areas:** 2 researchers (1 – HH exclusive station in the clean area; 2 – focused on the work dynamic, activities performed before and after HH)

METHODS



1. Observation:

- ▶ **Opportunities pre-established:** moments for HH recommended (WHO, 2009; WHO, 2012) and applied to CSSD
 - ▶ Beginning and end of the work shift
 - ▶ When arriving and leaving the CSSD
 - ▶ Before and after wearing gloves
- ▶ **Abstracted opportunities:** situations from the work process that HH were necessary.

(WHO, 2009; WHO, 2012)

METHODS



2. INTERVIEW:

- ▶ All workers observed
- ▶ Individual approaching, previously booked and carried out at the hospital
- ▶ When the participant refused, the data was excluded



METHODS

Ethics aspects

- ▶ Anchor Project - “Biologic risk related to processing: implication to workers and patients”
- ▶ Approved - protocol n° 167/2011
- ▶ Informed consent: after observation (2 copies)

Floor plan – CSSD

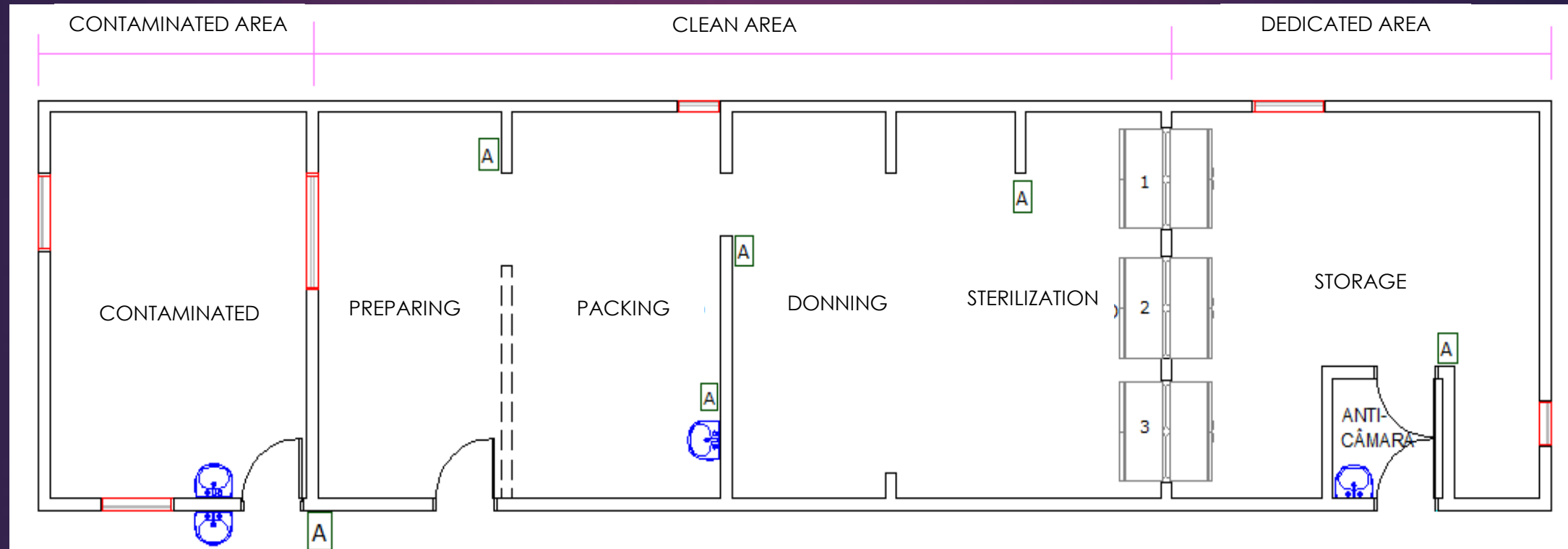
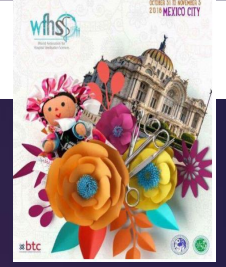


Figure 1. Floor plan of the resources available for hand hygiene in a Central Sterile Service Department of Goiânia. Goiânia, 2012.

RESULTS



- ▶ 33 participants (3 undergraduate students and the 3 nursing categories)
- ▶ 390 opportunities of HH: 14 (3,6%) use of 70% alcohol
- ▶ 280 activities performed after HH



Table 1 – Adherence to hand hygiene by moments with pre-established indication among workers of all areas of a Material and Sterilization Center of a large hospital, Goiânia, Goiás, Brazil, 2012

Moments for hand hygiene with pre-established indication	n	%
Access to the unit (n – 254)		
When entering	71	27.9
When leaving	51	20.1
Use of gloves (n – 109)		
Before putting them on	14	12.8
After removing them	65	59.6
Work shift (n – 96)		
Start	62	64.6
End	33	34.4

Contaminated area
(n=59): 40,7%
opportunities “after
removing gloves” the
workers did not washed
their hands.



Activities performed before HH – clean area (16)

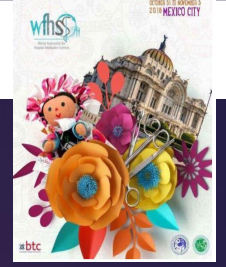
- ▶ After benches disinfection
- ▶ After checking loaner instruments
- ▶ Before mounting surgical boxes and trays
- ▶ Before handling packages and surgical instruments
- ▶ Before mounting autoclave load
- ▶ Before preparing Bowie-Dick test

Activities performed before HH – dedicated area (9)



- ▶ After benches disinfection
- ▶ Before opening the autoclave door
- ▶ Before unloading the autoclave
- ▶ Before storing sterilized products
- ▶ After recording the department productivity

Activities performed following HH (13)



- ▶ Mounting boxes/trays
- ▶ Packing instruments before sterilization process
- ▶ Mounting autoclave load
- ▶ Opening autoclave door
- ▶ Benches disinfection
- ▶ Preparing Bowie-Dick test

Opportunities for HH reported by the workers as necessary and performed



Opportunities for HH	Reported practice		HH necessary	
	n	%	n	%
When entering the unit	33	100,0	25	75,8
When leaving the unit	27	81,8	17	51,5
After removing gloves	27	81,8	13	39,4
Before wearing gloves	13	39,4	05	15,2
Before handling products	12	36,4	14	42,4
After handling products	11	33,3	02	6,0
Before meals	10	30,3	04	12,2
Before using the toilet	09	27,3	05	15,2
At the beginning the work shift	06	18,2	04	12,2
After using the toilet	06	18,2	02	6,0

Opportunities for HH reported by the workers as necessary and performed



Opportunities for HH	Reported practice		HH necessary	
	n	%	n	%
Before handling sterilized packages	04	12,2	03	9,0
Visually dirt hands	04	12,2	-----	-----
Before packing products	03	9,0	03	9,0
After meals	03	9,0	02	6,0
After disinfecting benches	03	9,0	01	3,0
Before loading the autoclave	02	6,0	03	9,0
At the end of the work shift	01	3,0	05	15,2
Throughout the work shift	01	3,0	04	12,2
Before receiving products for sterilization	01	3,0	02	6,0
After receiving products	01	3,0	01	3,0
After handling sterilized products	01	3,0	-----	-----

Moments for hand hygiene in Material and Sterilization Center

Momentos para higienizar as mãos em Centro de Material e Esterilização
Momentos para higienizar las manos en el Centro de Material y Esterilización

**Francine Vieira Pires^I, Anaclara Ferreira Veiga Tipple^I, Lucimara Rodrigues de Freitas^{II},
Adenícia Custódia Silva e Souza^{III}, Milca Severino Pereira^{III}**

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How to cite this article:

Pires FV, Tipple AFV, Freitas LR, Souza ACS, Pereira MS. Moments for hand hygiene in Material and Sterilization Center. Rev Bras Enferm [Internet]. 2016;69(3):511-5. DOI: <http://dx.doi.org/10.1590/0034-7167.2016690318i>

Submission: 07-03-2015 **Approval:** 01-30-2016



Moments for Hands Hygiene which have pré-established indication



- ▶ Beginning and end of the work shift
- ▶ When arriving and leaving the department
- ▶ Before wearing and after removing gloves

Additional moments for Hands hygiene

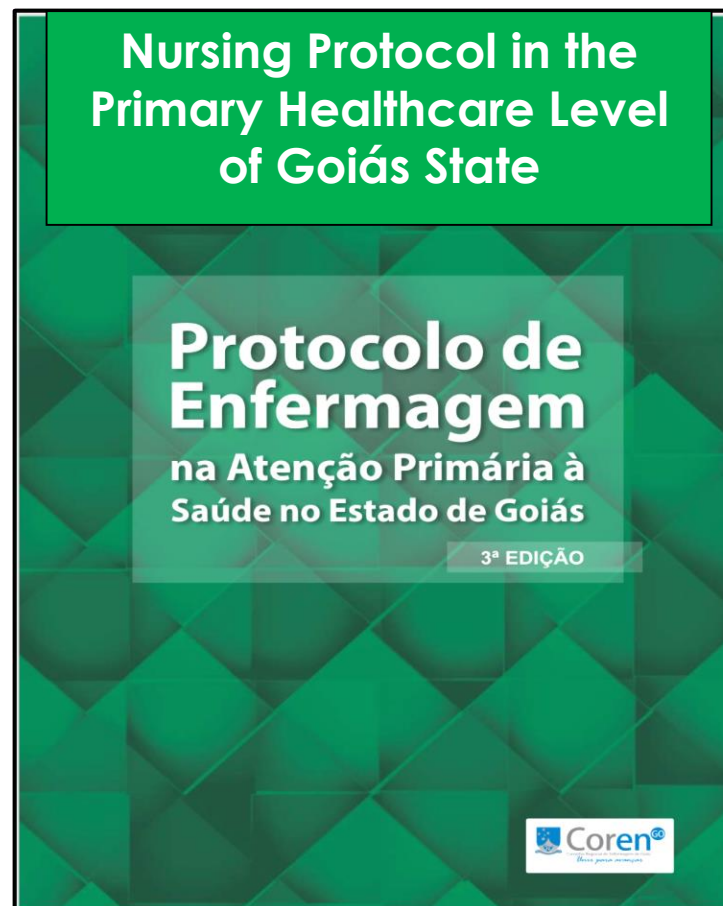


Clean Area/Storage	
After administrative activities (use of telephone, computer and minute books)	After registering unit's productivity
After disinfecting benches	After biological indicator incubation
Before assembling boxes and trays	After disposing biological indicator
After verification and inventory of consigned products	Before preparing Bowie and Dick test
After registering contaminated health care products received from consuming units*	Before wearing protective clothing (private uniform, cap, mask and shoe covers)
Before handling packages and health care products	After wearing protective clothing (shoe covers)
Before packaging health care products (boxes, outfit)	Before storing processed health care products
Before folding outfit	Before removing the load from the autoclave
Before receiving laundry outfit	Before handling health care products processed (look for a health care product or change places to clean the shelf)
Before loading the autoclave with health care products	Before distributing health care products to units

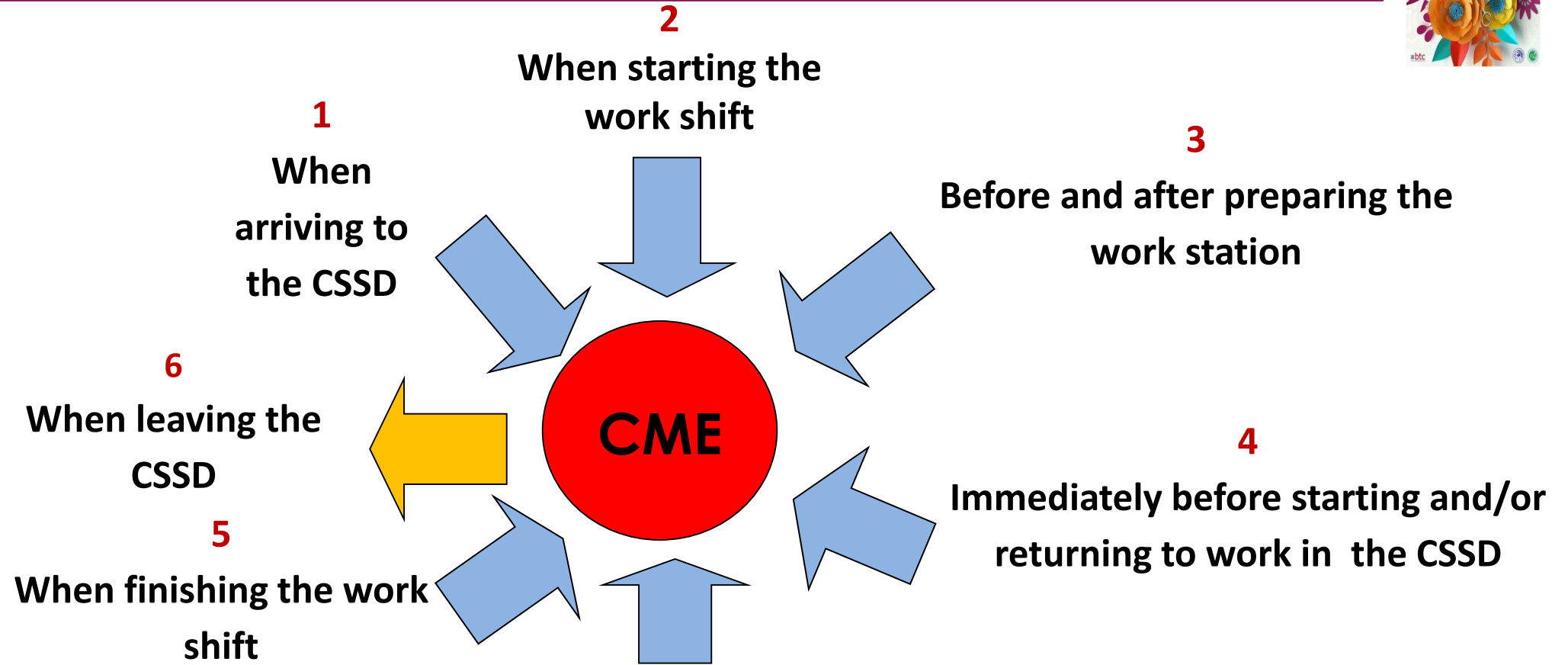
TIPPLE, A.F.V.; CHRISTÓFORO, B. E. B.; PONTES, D. O.; MELO, D. S.; NEVES, H. C. C.; GUADAGNIN, S. V. T. Protocolo de enfermagem no processamento de produtos para saúde. In: Rosso CFW, editor. Protocolo de Enfermagem na Atenção Primária à Saúde no Estado de Goiás. 3 ed. Goiânia: Conselho Regional de Enfermagem; 2017. p. 361-79.



Moments for hands hygiene in CSSD



MOMENTS FOR HH

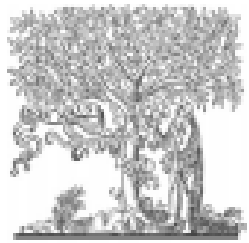


PERMANENT INDICATION

Before wearing and after removing gloves.
Every 1 hour of continuous work in the clean areas.



Regular interval for HH in CSSD → 1 hour

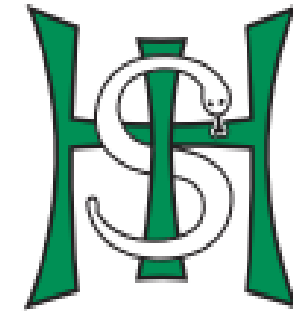


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Effect of hand hygiene and glove use on cleanliness of reusable surgical instruments

D.M. Costa^{a, b}, L.K.O. Lopes^b, A.F.V. Tipple^b, R.B. Castillo^c, H. Hu^a, A.K. Deva^a,
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ARTICLE INFO

SUMMARY

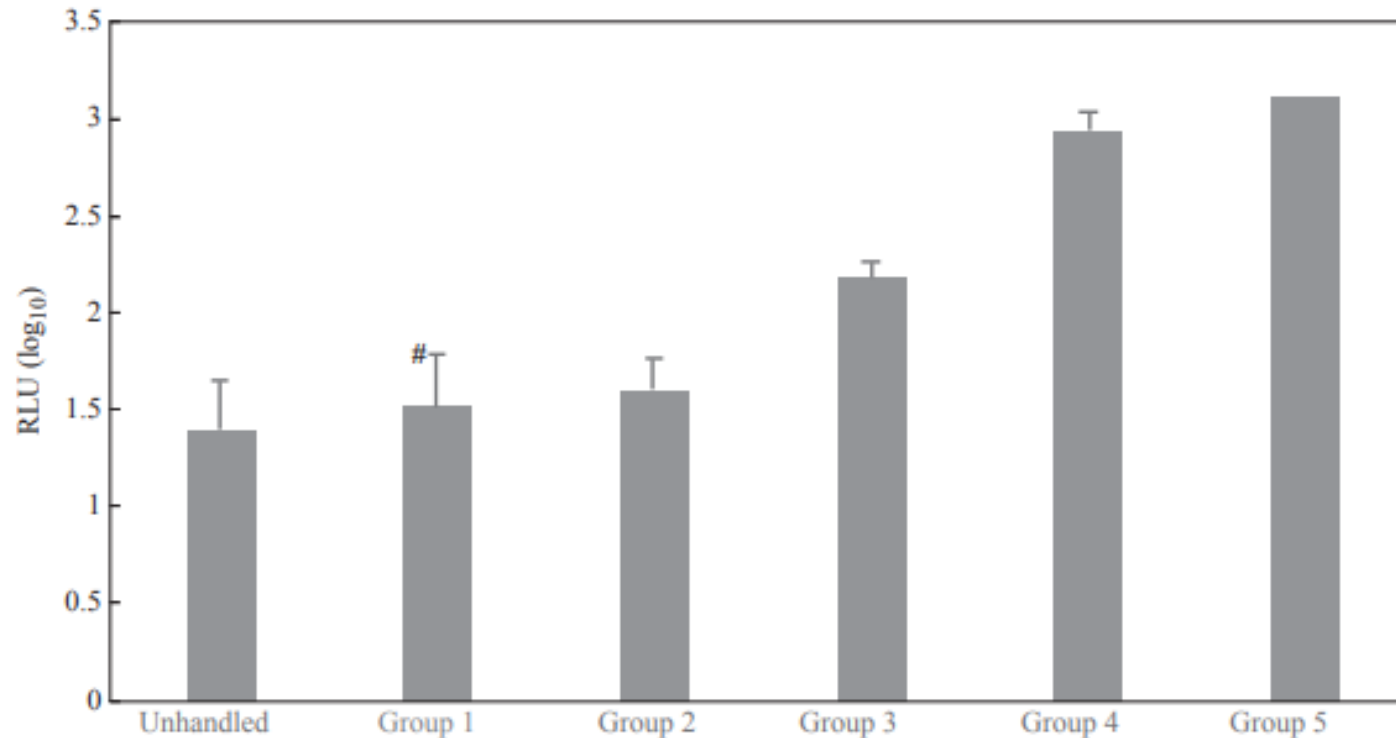


Figure 2. Contaminating adenosine triphosphate (relative light units: RLU) present on clean, unhandled (control group) Halsted-mosquito forceps and following packing with gloved hands (group 1); ungloved hands immediately following washing: time 0 (group 2); 1 h after handwashing (group 3); 2 h after handwashing (group 4); and 4 h after handwashing (group 5). #Significantly less than all other handled groups ($P < 0.05$); groups 1 and 2: significantly less than groups 3, 4, and 5; group 3: significantly greater than groups 1 and 2, and significantly less than groups 4 and 5 ($P < 0.05$).

Statistically significant correlation

The higher the interval between HH → the higher the ATP and CFU on the surgical instruments

HH every 1 hour in the CSSD clean area showed to be safer than 2 to 4 hours.

The way ...



Step I



Step II

al., 2007). E consiste na redução e/ou eliminação da microflora transitória e imediata quando do uso de antissépticos específicos no tempo recomendado (ANVISA).

e o Quadro 2 apresentam os momentos para a higienização das mãos no Centro, quais foram fundamentados em um estudo desenvolvido por Pires et al. (2016).

Figura 2. Fluxograma dos momentos de HM em CME, Goiânia, 2017.



Fonte: Elaborado pelos autores (2017) com base nas referências citadas.

364

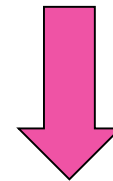
Step III



Effect of hand hygiene and glove use on cleanliness of reusable surgical instruments

Costa^{a,b}, L.K.O. Lopes^b, A.F.V. Tipple^b, R.B. Castillo^c, H. Hu^a, A.K. Deva^a,

Methodologic Study



Moments for HH in CSSD



OUR FLOWER - IPÊ



OUR FRUIT – PEQUI



OUR FRUIT – PEQUI



OUR FRUIT – PEQUI



Pirenópolis – 287 years



Goiás City (capital till 1933)
World Heritage Site – 2012





- Anna Lins dos Guimarães Peixoto Bretas
- Important Brazilian Writer
- 1965 – 1st book (75 years)



O que vale na vida não é o ponto de partida e sim a caminhada. Caminhando e semeando, no fim terás o que colher.

**What is worth in life is not the starting point but the walk.
Walking and sowing, at the end you will have what to reap.**

Thanks!
anaclara.fen@gmail.com



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