Journal of Hospital Management and Services
p-ISSN: 2829-842X (print); e-ISSN: 2830-1056 (online) Vol. 3 No. 2 November 2021 Page. 51-58

The Effect Of Laundry Chemical Dose On The Quality Of Cleaning Medical Linen In The Regional Public Hospital Of Kediri District

Slamet Hariadi[1*], Yuly Peristiowati [2]
Institut Ilmu Kesehatan STRADA Indonesia
[*]**Corresponding author:** slamtehariadiii@gmaiul.com

ABSTRACT
Contaminated Linen Can Produce Large Amounts Of Pathogenic Microorganisms. In Particular, Handling Dirty Linen Is Very Important To Reduce The Risk Of Nosocomial Infections. The Problems That Occur Due To Nosocomial Infections Are Very Complex And Can Cause Losses For Patients And Hospitals. In Addition, Unclean Washing Will Leave Stains And Odors From Previous Patients So That It Can Cause Discomfort To Patients Who Use It Later. The Purpose Of This Study Was To Analyze The Effect Of Laundry Chemical Doses On The Quality Of Cleanliness Of Medical Linen At The Kediri District General Hospital. The Design Of This Study Was An Experimental Quantitative Study With A *True Experimental Post Test Only Design Approach.* With The Focus Of The Research Directed To Analyze The Effect Of Laundry Chemical Doses On The Quality Of Cleanliness Of Medical Linen At The Kediri District General Hospital With A Sample Of 74 Samples Taken Using The *Accidental Sampling Technique.* The Findings Showed That Based On The Mann Whitney Test, The Value Of 0.000 <0.05 Was Obtained So That It Can Be Concluded That There Is An Effect Of The Laundry Chemical Dose On The Quality Of The Smell Of Medical Linen At The Kediri District General Hospital. And Also Obtained A Value Of 0.001 <0.05 So That It Can Be Concluded That There Is An Effect Of The Laundry Chemical Dose On The Visual Quality Of Medical Linen At The Kediri District General Hospital. The Provision Of Laundry Chemicals On Medical Linen In Both Infectious And Non-Infectious Categories Can Effectively Improve The Quality Of Cleanliness Of Medical Linen And Can Be Proven By The Quality Of The Fresh Smell And The Visual Quality That Looks Clean.

Keywords **:** Chemical Laundry, Odor, Visual

INTRODUCTION
Hospitals Are Health Facilities That Provide Comprehensive Individual Health Services By Providing Inpatient, Outpatient And Emergency Services (Ministry Of Health Of The Republic Of Indonesia, 2009). Hospitals As One Of The Links In The Chain Of Public Health Service Facilities Have A Very Strategic Role Where Hospitals Are Expected To Play An Optimal Role In Accelerating The Improvement Of Public Health, So That Hospitals Are Required To Provide Excellent And Complete Services To The Community By Continuing To Improve The Quality Of Their Services. One Effort To Improve Services In Hospitals Is Through The Provision Of Professional, Quality And Safe Medical And Non-Medical Support Services (Ministry Of Health Of The Republic Of Indonesia, 2014).

Hospitals Are Public Places, Places Where Sick And Healthy People Gather And In Their Daily Activities, They Can Become Places Where Diseases Can Be Transmitted. Hospitals As Health Service Providers Are Required To Strive To Prevent The Risk Of Infection For Patients And Hospital Staff. One Indicator Of Success In Hospital Services Is The Low Rate Of Nosocomial Infections Or *Healthcare Associated Infections* (*Hais*) In Hospitals. To Achieve This Success, It Is Necessary To Prevent And Control Infections In Hospitals (Ministry Of Health Of The Republic Of Indonesia, 2019). One Of The Prevention

And Control Effosrts That Can Be Carried Out By Hospitals Is By Implementing Hospital Sanitation Services. Sick.

Nosocomial Infections Are Still A Health Care Problem In Hospitals Around The World. According To Suparno Et Al. (2013), Based On Who Data, The Incidence Of Nosocomial Infections Is 9% In Developing Countries. The Results Of A Prevalence Survey Conducted By Who On 55 Hospitals From 14 Countries Representing 4 Regions (Europe, Eastern Mediterranean, South-East Asia And Western Pacific), Showed An Average Of 8.7% Of Patients Treated In Hospitals Suffered From Infections. Nosocomial.

In Indonesia, The Prevalence Of Nosocomial Infections Issued By The Directorate General Of Medical Services Of The Indonesian Ministry Of Health In 2013 Was An Average Figure Of 8.1 % (Astuti In Wiwing, 2015). The Results Of A Point Prevalence Survey From 11 Hospitals In Dki Jakarta Conducted By Perdalin Jaya And The Prof. Dr. Sulianti Saroso Infectious Disease Hospital In Jakarta In 2013 Obtained Nosocomial Infection Rates For Ssi (Surgical Wound Infection) 18.9%, Uti (Urinary Tract Infection) 15.1%, Primary Bloodstream Infection 26.4%, Pneumonia 24.5% And Other Respiratory Tract Infections 15.1%, And Other Infections 32.1% (Indonesian Ministry Of Health, 2019). In A Study Conducted In 11 Hospitals In Dki Jakarta In 2014, It Was Found That 9.8% Of Inpatients Had New Infections During Treatment Or There Were 5 To 6 Cases Of Nosocomial Infections For Every 100 Hospital Visits (Ginting, 2011).

Based On The Results Of A Preliminary Study Conducted By Researchers On June 13, 2020 At The Kediri District Hospital, It Was Found That During Linen Washing, Linen Was Returned From The Room To The Cssd Several Times, Which Was Because The Room Staff Considered That The Linen Still Had Blood Stains Or Dirt, In Addition To The Musty And Unpleasant Smell Of Linen. So The Laundry Team At The Hospital Cssd Carried Out Rewashing In Order To Get Clean And Fresh-Smelling Cloth.

The Implementation Of Hospital Sanitation Is An Integral Part Of The Overall Hospital Program, The Implementation As Part Of The Program Is Based On The Applicable Laws In The Hospital. Hospital Environmental Sanitation Includes Controlling Various Physical, Chemical, Biological, And Socio-Psychological Environmental Factors In The Hospital (Adisasmito, 2017). Related To The Principles Of Hospital Sanitation Applied In A Series Of Efforts To Prevent And Reduce Nosocomial Infections, It Can Be Through Medical And Non-Medical Waste Management , Liquid Waste Management, Provision Of Clean Water , Insect And Rodent Control And Management Linen.

All Rooms In The Hospital Require And Use Linen. Given That Linen Is Used In Every Room In The Hospital, Comprehensive Linen Management Is Needed. Good Linen Management In Hospitals Is One Of The Non-Medical Supporting Aspects That Plays A Role In Efforts To Improve The Quality Of Services In Hospitals . The Management In Question Starts From Planning, Handling Clean Linen, Handling Dirty Linen Or Washing To Disposal (Ministry Of Health Of The Republic Of Indonesia, 2014). The Sterilization Center Or *Central Sterile Supply Department* (*Cssd*) In Its Daily Duties Assists The Hospital Laundry Department To Prepare Sterile Linen. The Level Of Service Quality Of The Laundry Unit Is One Of The Factors That Can Maintain A Positive Image Of A Hospital (Dozier, Et Al., 2018).

Contaminated Linen Can Produce Large Amounts Of Pathogenic Microorganisms (Ministry Of Health Of The Republic Of Indonesia, 2010). In Particular, Handling Dirty Linen Is Very Important To Reduce The Risk Of Nosocomial Infections. Nosocomial Infections Or Better Known As *Hospital Acquired Infections* Are Infections That Typically Occur Or Are Obtained In Hospitals. This Infection Has Been Known For A Long Time. The Problems That Occur Due To Nosocomial Infections Are Very Complex And Can Cause Losses For Patients And Hospitals, And Can Even Result In Increased Morbidity And Mortality Rates (Ministry Of Health Of The Republic Of Indonesia, 2014). Some Cases Of Nosocomial Infections May

Not Cause Patient Death, But Cause Patients To Be Hospitalized Longer (Ministry Of Health Of The Republic Of Indonesia, 2019). In Addition, Unclean Washing Will Leave Stains And Odors From Previous Patients, Which Can Cause Discomfort To Patients Who Use It Next.

Based On The Above Conditions, The Author Is Interested In Researching The Effect Of Laundry Chemical Doses On The Quality Of Cleanliness Of Medical Linen At The Kediri District General Hospital.

METHODS

In The Study Used Analytical Research Used To Measure The Effect Of Laundry Chemical Doses On The Quality Of Cleanliness Of Medical Linen At The Kediri District General Hospital . Analytical Research Is A Study That Seeks The Influence Between Variables (Sastroasmoro, 2012). This Research Design Uses *True Post Test Only Design* . *True Experimental Post Test Only Design* Is An *Experimental Study Using A* Control Group And Samples That Are Not Selected Randomly, With A *Test Control Design Type.*

RESULTS

Table 1 Mann Whitney Test Of The Effect Of Laundry Chemicals With A Dose Of 35 Ml Emulsion , 110 Ml Alkali And 90 Ml Oxygen Bl On The Odor And Visual Quality Of Medical Linen At The Kediri District General Hospital

Test Statistics [A]	
Mann-Whitney U	2,000
Wilcoxon W	9,000
Z	5,208
Asymp. Sig. (2-Tailed)	0,000
A. Grouping Variable: Category	

Based On The Statistical Test Using Mann Whitney, A Value Of 0.000 <0.05 Was Obtained, So It Can Be Concluded That There Is An Effect Of Chemical Laundry With A Dose Of 35 Ml Emulsion, 110 Ml Alkali And 90 Ml Oxygen Bl On The Quality Of Odor And Visual Of Medical Linen At The Kediri District General Hospital .

Table 2 Mann Whitney Test Of The Effect Of Laundry Chemicals With A Dose Of 40 Ml Emulsion, 120 Ml Alkali And 100 Ml Oxygen Bl On The Odor And Visual Quality Of Medical Linen At The Kediri District General Hospital

Test Statistics [A]	
Mann-Whitney U	4,340
Wilcoxon W	7,010
Z	3,720
Asymp. Sig. (2-Tailed)	0,000
A. Grouping Variable: Category	

Based On The Statistical Test Using Mann Whitney, A Value Of 0.000 <0.05 Was Obtained, So It Can Be Concluded That There Is An Effect Of Chemical Laundry With A Dose Of 40 Ml Emulsion, 120 Ml Alkali And 100 Ml Oxygen Bl On The Quality Of Odor And Visual Of Medical Linen At The Kediri District General Hospital .

Table 3 Mc Nemar Test Differences In Laundry Chemicals With Emulsion Dosage Of 40 Ml, Alkali 120 Ml And Oxygen Bl 100 Ml With Laundry Chemicals With Emulsion Dosage Of 35 Ml , Alkali 110 Ml And Oxygen Bl 90 Ml On The Quality Of Odor And Visual Of Medical Linen At The Regional General Hospital Of Kediri Regency

Test Statistics [A]	
	Dosage35 & Dosage40
N	53
Exact Sig. (2-Tailed)	,008 [B]
A. Mcnemar Test	
B. Binomial Distribution Used.	

Based On The Statistical Test Using Mc Nemar , A Value Of 0.000 <0.05 Was Obtained, So It Can Be Concluded That There Is A Difference Between Chemical Laundry With A Dose Of 40 Ml Emulsion, 120 Ml Alkali And 100 Ml Oxygen Bl With Chemical Laundry With A Dose Of 35 Ml Emulsion, 110 Ml Alkali And 90 Ml Oxygen Bl. On The Quality Of The Smell And Visual Of Medical Linen At The Kediri District General Hospital .

DISCUSSION

A. The Effect Of Chemical Laundry With Emulsion Dosage Of 35 Ml , Alkali 110 Ml And Oxygen Bl 90 Ml On The Odor And Visual Quality Of Medical Linen At The Regional General Hospital Of Kediri Regency

Mann Whitney Test, The Value Of 0.000 <0.05 Was Obtained, So It Can Be Concluded That There Is An Effect Of Chemical Laundry With A Dose Of 35 Ml Emulsion, 110 Ml Alkali And 90 Ml Oxygen Bl On The Quality Of The Smell Of Medical Linen At The Kediri District General Hospital. Based On The Normality Test, The Significance Value Was Obtained > 0.05, So It Can Be Concluded That The Data Contributes Normally. Based On The Homogeneity Test, The Significance Value Was Obtained 0.180 > 0.05, So It Can Be Concluded That The Data Is Homogeneous.

Mann Whitney Test, The Value Of 0.000 <0.05 Was Obtained, So It Can Be Concluded That There Is An Effect Of Chemical Laundry With A Dose Of 35 Ml Emulsion, 110 Ml Alkali And 90 Ml Oxygen Bl On The Visual Quality Of Medical Linen At The Kediri District General Hospital. Based On The Normality Test, The Significance Value Was Obtained > 0.05, So It Can Be Concluded That The Data Contributed Normally. Based On The Homogeneity Test, The Significance Value Was Obtained 0.180 > 0.05, So It Can Be Concluded That The Data Is Homogeneous.

Linen Is A Material/Fabric Used In Hospitals For Mattress Coverings, Pillows, Bolsters, Blankets, Staff Clothes, Patient Clothes And Other Sterile Instruments. The Types Of Fabrics That Are Widely Used Are Japanese Cotton, Drill, Flannel, Waterproof And Antibacterial Materials (Aini Nur, 2010).

Hospital Laundry Is A Place For Washing Hospital Linens Equipped With Supporting Facilities In The Form Of Washing Machines, Tools And Disinfectants, Steam Boilers, Dryers, Tables, And Machine Sets. The Role Of Linen Is Very Important For The Selling Value Of The Room. In Addition, Poor Linen Management Can Cause Infections. There Are Two Types Of Linen According To Contamination, Namely Infectious Linen And Non-Infectious Linen . Infectious Linen Is Linen That Has Been Exposed To Patient Body Fluids Such As Feces, Vomit, Blood, And Urine. Non-Infectious Linen Is Linen That Has Not Been Exposed To Human Body Fluids. According To The Stain, Linen Is Divided Into Three, Heavy, Moderate, And Light Stain Linen (Cahyono, 2011).

Although Linen Is Not Used Directly In The Treatment Process, Its Influence Can Be Seen If Linen Handling Is Not Managed Properly, It Will Result In The Transmission Of Disease, Namely Nosocomial Infections Or What Is Now More Often Called Health-Care Associated Infections (Hais). Hais Are Infections That Patients Get During Treatment Procedures And Medical Actions In Health Services After 48 Hours And 30 Days After Leaving The Health Care Facility (Who, 2011).

According To Researchers, The Emergence Of Unpleasant Odors On Used Patient Linen Is Caused By Sweat And Body Odor That Sticks To The Linen, Causing Bacteria To Grow On The Linen And Causing An Unpleasant Odor. Giving Laundry Chemicals To Dirty Linen Can Effectively Remove Unpleasant Odors That Stick To The Linen For A Long Time. So According To The Results Of The Study, There Is An Effect Of Laundry Chemicals With A Dose Of 35 Ml Emulsion, 110 Ml Alkali And 90 Ml Oxygen Bl On The Quality Of Odor And Visual Medical Linen At The Kediri District General Hospital.

B. The Effect Of Chemical Laundry With Emulsion Dosage Of 40 Ml, Alkali 120 Ml And Oxygen Bl 100 Ml On The Odor And Visual Quality Of Medical Linen At The Regional General Hospital Of Kediri Regency

Mann Whitney Test, The Value Of 0.000 <0.05 Was Obtained, So It Can Be Concluded That There Is An Effect Of Chemical Laundry With A Dose Of 40 Ml Emulsion, 120 Ml Alkali And 100 Ml Oxygen Bl On The Quality Of The Smell Of Medical Linen At The Kediri District General Hospital. Based On The Normality Test, The Significance Value Was Obtained > 0.05, So It Can Be Concluded That The Data Contributes Normally. Based On The Homogeneity Test, The Significance Value Was Obtained 1,000> 0.05, So It Can Be Concluded That The Data Is Homogeneous.

Mann Whitney Test, The Value Of 0.000 <0.05 Was Obtained, So It Can Be Concluded That There Is An Effect Of Chemical Laundry With A Dose Of 40 Ml Emulsion, 120 Ml Alkali And 100 Ml Oxygen Bl On The Visual Quality Of Medical Linen At The Kediri District General Hospital. Based On The Normality Test, The Significance Value Was Obtained > 0.05, So It Can Be Concluded That The Data Contributed Normally. Based On The Homogeneity Test, The Significance Value Was Obtained 1,000> 0.05, So It Can Be Concluded That The Data Is Homogeneous.

Hospital Sanitation Service Management Is Organized In Order To Create A Comfortable And Clean Hospital Environment As A Support For The Healing Efforts Of Patients, In Addition To Preventing The Transmission Of Nosocomial Infectious Diseases To Fellow Patients And Healthy People, Both Visitors And Hospital Staff. Thus, The Implementation Of Hospital Sanitation Management Can Be Said To Be The Initial Key To Preventing Nosocomial Infections (Nasution, 2010).

The Implementation Of Hospital Sanitation Is An Integral Part Of The Overall Hospital Program, The Implementation As Part Of The Program Is Based On The Applicable Laws In The Hospital. Hospital Environmental Sanitation Includes Controlling Various Physical, Chemical, Biological, And Socio-Psychological Environmental Factors In The Hospital (Adisasmito, 2017). Related To The Principles Of Hospital Sanitation Applied In A Series Of Efforts To Prevent And Reduce Nosocomial Infections, It Can Be Through Medical And Non-Medical Waste Management , Liquid Waste Management, Provision Of Clean Water , Insect And Rodent Control And Management Linen.

All Rooms In The Hospital Require And Use Linen. Given That Linen Is Used In Every Room In The Hospital, Comprehensive Linen Management Is Needed. Good Linen Management In Hospitals Is One Of The Non-Medical Supporting Aspects That Plays A Role In Efforts To Improve The Quality Of Services In Hospitals . The Management In Question Starts From Planning, Handling Clean Linen, Handling Dirty Linen Or Washing To Disposal (Ministry Of Health Of The Republic Of Indonesia, 2014). The Sterilization Center Or *Central Sterile Supply Department* (*Cssd*) In Its Daily Duties Assists The Hospital Laundry Department To Prepare Sterile Linen. The Level Of Service Quality Of The Laundry Unit Is One Of The Factors That Can Maintain A Positive Image Of A Hospital (Dozier, Et Al., 2018).

Contaminated Linen Can Produce Large Amounts Of Pathogenic Microorganisms (Ministry Of Health Of The Republic Of Indonesia, 2010). In Particular, Handling Dirty Linen Is Very Important To Reduce The Risk Of Nosocomial Infections. Nosocomial Infections Or

Better Known As *Hospital Acquired Infections* Are Infections That Typically Occur Or Are Obtained In Hospitals. This Infection Has Been Known For A Long Time. The Problems That Occur Due To Nosocomial Infections Are Very Complex And Can Cause Losses For Patients And Hospitals, And Can Even Result In Increased Morbidity And Mortality Rates (Ministry Of Health Of The Republic Of Indonesia, 2014). Some Cases Of Nosocomial Infections May Not Cause Patient Death, But Cause Patients To Be Hospitalized Longer (Ministry Of Health Of The Republic Of Indonesia, 2019). In Addition, Unclean Washing Will Leave Stains And Odors From Previous Patients, Which Can Cause Discomfort To Patients Who Use It Next.

According To Researchers, The Dirty Condition Of Linen Used By Patients In Hospitals Is Caused By Many Things, Namely Medicines, Patient Sweat, Patient Food Residue And Even Patient Feces Themselves Can Cause Linen To Look Dirty And Cause Stains That Are Visible To The Eye. Giving Chemical Laundry To Remove Stains On Linen Used By Patients Has Proven Effective Where Most Of The Stains Disappear And Leave No Trace, Although There Are Some Linens That Still Have Stains That Remain Where This Is Caused By The Length Of Time The Stains Have Been On The Linen And Dried. In Accordance With The Results Of The Study, There Is An Effect Of Chemical Laundry With A Dose Of 40 Ml Emulsion, 120 Ml Alkali And 100 Ml Oxygen Bl On The Quality Of The Smell And Visual Of Medical Linen At The Kediri District General Hospital.

C. Differences In Laundry Chemicals With Emulsion Dosage Of 40 Ml, Alkali 120 Ml And Oxygen Bl 100 Ml With Laundry Chemicals With Emulsion Dosage Of 35 Ml , Alkali 110 Ml And Oxygen Bl 90 Ml On The Odor And Visual Quality Of Medical Linen At The Regional General Hospital Of Kediri Regency

Based On The Statistical Test Using Mc Nemar , A Value Of 0.000 <0.05 Was Obtained, So It Can Be Concluded That There Is A Difference Between Chemical Laundry With A Dose Of 40 Ml Emulsion, 120 Ml Alkali And 100 Ml Oxygen Bl With Chemical Laundry With A Dose Of 35 Ml Emulsion, 110 Ml Alkali And 90 Ml Oxygen Bl. On The Quality Of The Odor Of Medical Linen At The Kediri District General Hospital.

Based On The Statistical Test Using Mc Nemar , A Value Of 0.000 <0.05 Was Obtained, So It Can Be Concluded That There Is A Difference Between Chemical Laundry With A Dose Of 40 Ml Emulsion, 120 Ml Alkali And 100 Ml Oxygen Bl With Chemical Laundry With A Dose Of 35 Ml Emulsion, 110 Ml Alkali And 90 Ml Oxygen Bl. On The Visual Quality Of Medical Linen At The Kediri District General Hospital.

According To The Decree Of The Minister Of Health Of The Republic Of Indonesia No. 1204 Of 2014, Concerning The Requirements For Hospital Environmental Health, It Is Explained That The Minimum Bacteriological Content Limit For Clean Linen Does Not Contain *Bacillus Spores* <6x103 ^{Per} Square Inch, While For Special Needs Linen, Such As Sterile Surgical Linen, It Must Not Contain *Bacillus Spores Or The Bacillus* Spore Content Must Be Equal To 0. *The Bacillus* In Question Is A Type Of Pathogenic Bacteria In The Form Of A Bacillus/Rod, Such As *Mycobacterium Tuberculosis* , And The Results Of *The Bacillus Content* Can Be Known From The Examination Of The Number Of Germs Carried Out In The Laboratory By Swabbing The Linen.

The Effectiveness Of The Results Of The Physical Examination Can Be Reviewed From The Examination By The Five Senses. The Physical Quality Of Linen Can Be Seen From The Aroma Of Clean Linen Which Is Always Fresh And Fragrant, Odorless, Feels Soft On The Skin, Free From Stains, The Fabric Fibers Are Not Easily Brittle And No Tears Are Found On The Linen Fabric. If There Is A Deficiency In One Of These Aspects, Then It Is Necessary To Rewash Or Sort The Linen According To The Conditions Of Each (Ministry Of Health Of The Republic Of Indonesia, 2014).

According To Researchers, Giving High Doses Of Chemical Laundry Can Improve The Quality Of Cleanliness Of Infectious Medical Linen Both In Terms Of Odor Quality And

Visual Quality. So It Can Be Concluded That There Is A Difference In Chemical Laundry With A Dose Of 40 Ml Emulsion, 120 Ml Alkali And 100 Ml Oxygen Bl With Chemical Laundry With A Dose Of 35 Ml Emulsion, 110 Ml Alkali And 90 Ml Oxygen Bl On The Odor And Visual Quality Of Medical Linen At The Kediri District General Hospital.

CONCLUSION

1. There Is An Effect Of Chemical Laundry With A Dose Of 35 Ml Emulsion , 110 Ml Alkali And 90 Ml Oxygen Bl On The Odor And Visual Quality Of Medical Linen At The Kediri District General Hospital.
2. There Is An Effect Of Chemical Laundry With A Dose Of 40 Ml Emulsion, 120 Ml Alkali And 100 Ml Oxygen Bl On The Quality Of Odor And Visual Of Medical Linen At The Kediri District General Hospital.
3. There Is A Difference Between Laundry Chemicals With A Dose Of 40 Ml Emulsion, 120 Ml Alkali And 100 Ml Oxygen Bl And Laundry Chemicals With A Dose Of 35 Ml Emulsion, 110 Ml Alkali And 90 Ml Oxygen Bl. On The Odor And Visual Quality Of Medical Linen At The Kediri District General Hospital .

REFERENCE

Adisasmito, W. 2007. Hospital Environmental Management System. Jakarta: Pt Raja Grafindo Persada.

Bungin, B. 2017. Quantitative Research Methodology. Jakarta: Prenada Media

Darmadi. 2008. Nosocomial Infections: Problems And Control. Jakarta: Salemba Medika Publisher.

Ministry Of Health Of The Republic Of Indonesia. 2009. Guidelines For The Installation Of Central Sterile Supply Department (Cssd) In Hospitals. Jakarta: Ministry Of Health Of The Republic Of Indonesia.

Diantha, I, M, P. 2017. Normative Legal Research Methodology. Jakarta: Prenada Media Group. Jember District Health Office. 2016. Performance Indicators Of Jember District Hospital Services.

Dozier, S., S, Et Al. 2008. A Study Of The Laundry Servives At Central Texas Medical Center. Iie Annual Conference Journal. Page: 475-480.

Fijan Sabina And Turk Sonja S. 2012. Hospital Textiles, Are They A Possible Vehicle For Healthcare Associated Infections ?. International Journal Of Environmental Research And Public Health. 9 (2012) 3330-3343. Https://Www.Mdpi.Com/Journal/Ijerph. [Accessed 5 October 2018]

Fip-Upi. 2007. Science And Application Of Education. Bandung: Pt Imperial Bhakti Utama.

Junanto, K. 2010. The Role And Function Of Laundry In Hospitals. Surabaya: Hospital Infection Control Committee.

Ministry Of Health Of The Republic Of Indonesia. 2010. Guidelines For Class B Hospital Facilities And Infrastructure. Jakarta: Center For Health Facilities And Infrastructure. Ministry Of Health Of The Republic Of Indonesia. Decree Of The Minister Of Health Of The Republic Of Indonesia Number 1204/Menkes/Sk/X/2004 Concerning Hospital Environmental Health Requirements.

Moelyaningrum, A, D. 2015. Linen: Efforts To Control Nosocomial Infections, A Study In Public Hospitals In Indonesia. Proceedings Of The 1st National Public Health Symposium. Pages: 238-247.

Nasution. 2010. Differences In Environmental Sanitation And Health Worker Behavior In The Icu Room Of Dr. Pirngadi Regional Hospital And Class Ii Putri Hijau Hospital, Kesdam I/Bb Medan In 2010. Thesis. Medan: Faculty Of Public Health, University Of North Sumatra.

Notoadmodjo, S. 2012. Health Research Methods. Jakarta: Rineka Cipta. Regulation Of The Minister Of Health Of The Republic Of Indonesia Number 340/Menkes/Per/Iii/2010 Concerning Hospital Classification.

Sasahara, T. Et Al. 2011. Bacillus Cereus Bacteremia Outbreak Due To Contaminated Hospital Linens. European Journal Of Clinical Microbiology And Infectious Diseases. Vol 13 (2011) 219-226. Https://Link.Springer.Com/Article/10.1007%2fs10096-010-1072-2. [Accessed 4 October 2018]

Sugiarto, E. 2015. Compiling Qualitative Research Proposals For Undergraduate And Dissertations. Yogyakarta: Suaka Media.

Sugiyono. 2015. Qualitative Quantitative Research Methods And R&D. Bandung: Alfabeta.

Suryanto, Ld 2008. Bacteriological Quality Of Linen Before And After Washing. Thesis. Surabaya: Faculty Of Public Health, Airlangga University.

Tampubolon, E. 2009. Analysis Of The Implementation Of Malnutrition Control Program In The Medan Labuhan Health Center Working Area, Medan Labuhan District In 2008. Not Published. Thesis. Medan: Master Of Public Health Study Program, University Of North Sumatra.

Tripadanti, O. 2015. Study Of Linen Management In The Central Sterile Supply Department (Cssd) Installation And Laundry Of Dr. Iskak Tulungagung Regional Hospital. Thesis. Jember: Faculty Of Public Health, University Of Jember.

Triwibowo, 2013. Environmental Health And Occupational Safety And Health. Yogyakarta: Nuda Medika. Law Of The Republic Of Indonesia Number 20 Of 2003 Concerning The National Education System. Law Of The Republic Of Indonesia Number 44 Of 2009 Concerning Hospitals