



UNIVERSITAS GADJAH MADA

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Sexually Transmitted Infection in Disaster Situation

Elsi Dwi Hapsari, S.Kp, M.S., D.S

School of Nursing,
Faculty of Medicine, Public Health, and Nursing
Universitas Gadjah Mada
INDONESIA



Elsi Dwi Hapsari



Scopus ID: 13406659900

<https://www.scopus.com/authid/detail.uri?authorId=1340665990>

H-index 4

Google Scholar :

<https://scholar.google.com/citations?user=lzzZiTkAAAAJ&hl=en>

H-index 5

Research Gate Score:

https://www.researchgate.net/profile/Elsi_Hapsari2

RG Score 5,38



Outline

- **Overview of Sexually Transmitted Infection (STI)**
- **STI in Disaster Situation**
- **STI among Youth**



1

Overview of Sexually Transmitted Infection



Sexually Transmitted Infections

- STIs encompass a group of infections that can be spread or acquired through sexual contact.
- STIs are spread predominantly by sexual contact, including vaginal, anal and oral sex.
- Some STIs can also be spread through non-sexual means such as via blood or blood products.
- Many STIs—including chlamydia, gonorrhoea, primarily hepatitis B, HIV, and syphilis—can also be transmitted from mother to child during pregnancy and childbirth.

(WHO, 2016)



Etiology of IMS

Bacteria

Yeast

Virus

Protozoa



Is it Curable?

Curable

- *Syphilis,*
- *Gonorrhea,*
- *Chlamydia,*
- *Trichomoniasis*

Non curable

- *Hepatitis B,*
- *Herpes simplex,*
- *Human Immunodeficiency Virus (HIV) and*
- *Human Papillomavirus (HPV)*

(WHO, 2016)



Serious Impact of STIs

Risk of HIV
acquisition

Adverse birth
outcomes

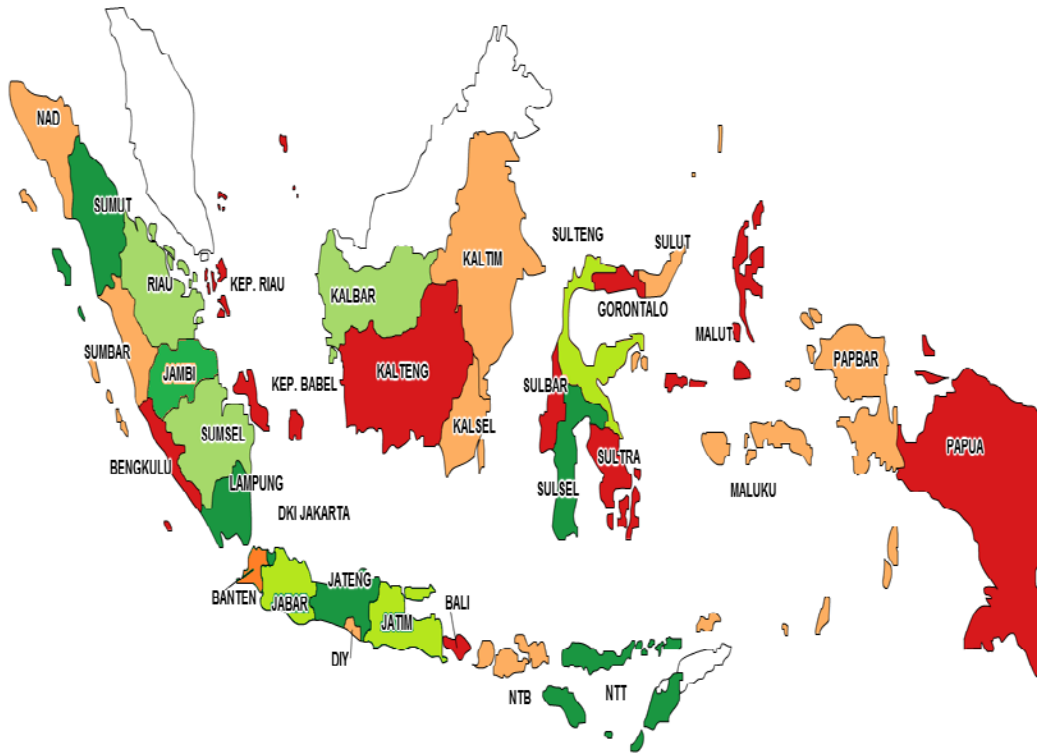
Cervical cancer

Infertility



Social and Cultural Aspects related to Reproductive Health

Indonesia

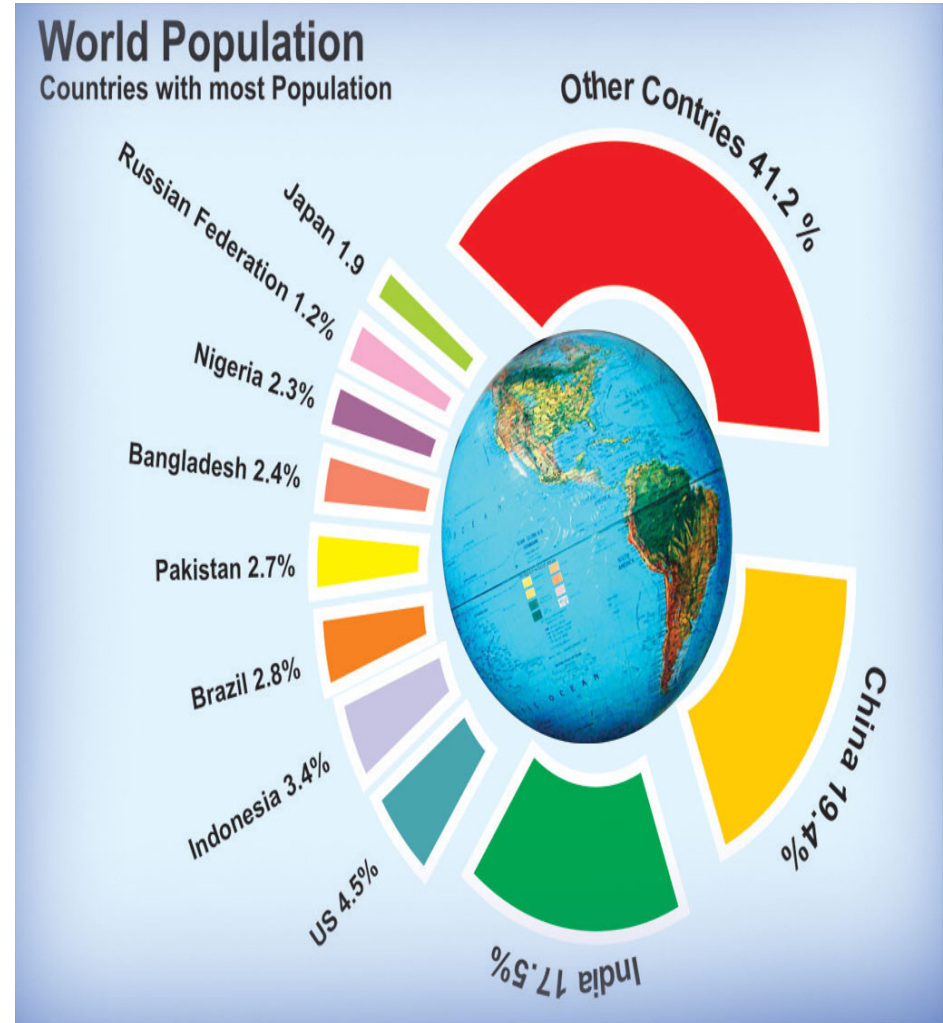


Indonesia is the largest Islamic country

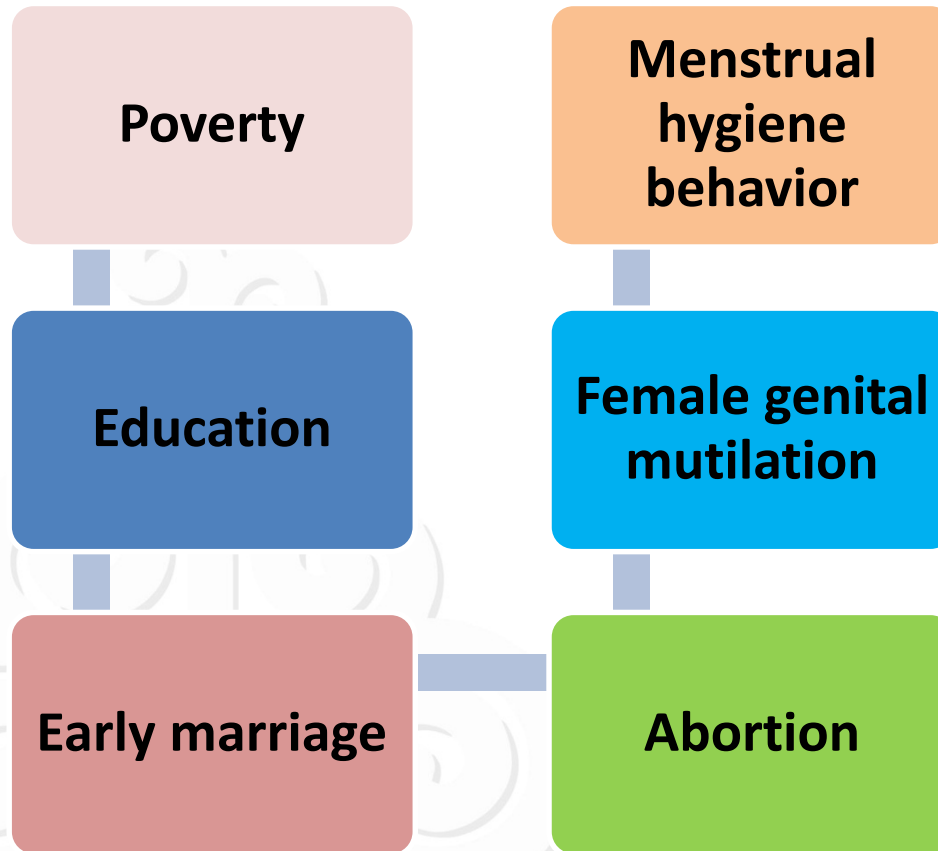
False information that HPV vaccine given to elementary school girls in Indonesia could cause early menopause; why it is given to girls who is not yet sexually active?



Religion, Ethnic Groups, and Population



Social and Cultural Aspects related to Reproductive Health



How to inform about sexually transmitted infections?



Brief Information of STIs



Gonorrhea

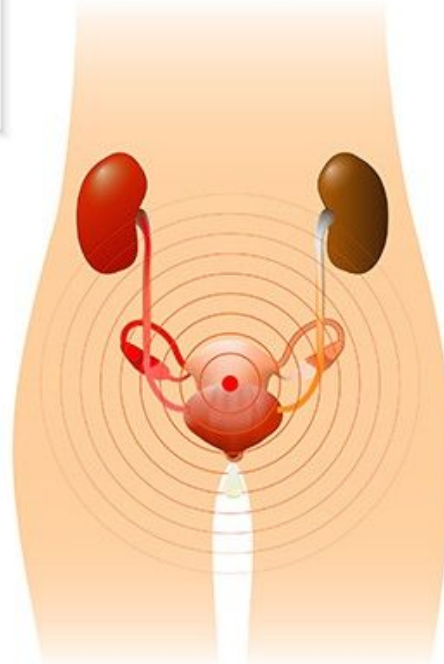
Signs and symptoms

Neisseria gonorrhoeae

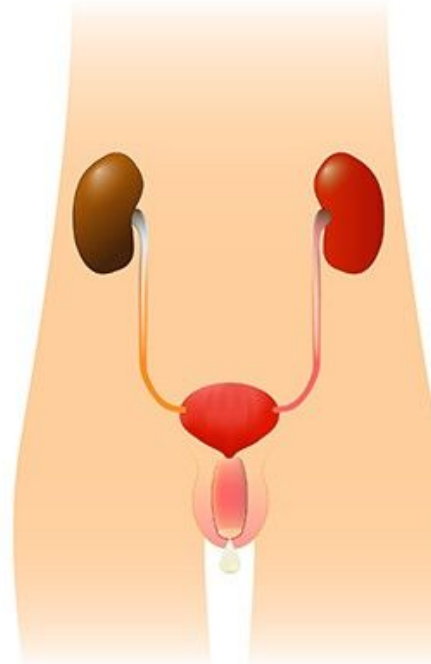


Abdominal pain
or pain with
intercourse

Vaginal
discharge
and bleeding



In female



In male

Infected kidneys

Urinary tract
infection

Burning sensation
with urination

Inflammation
of the penile

Swollen testicles

Discharge from
the penis



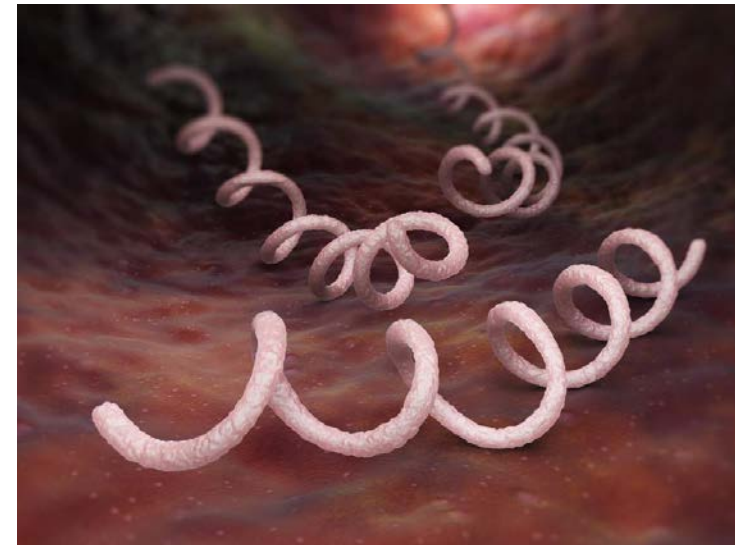
2. Chlamydia

- **Caused by Chlamydia trachomatis.**
- **Symptoms appear within 3-12 days or more after infected.**
- **Affect area of vagina, cervix, penis, anus, urinary tract, and eye.**



3. Syphilis (raja singa)

- **Caused by Treponema pallidum.**
- **Chronic and systemic.**
- **Poor sanitation.**
- **Generally no symptoms.**



<https://www.independent.co.uk/news/health/syphilis-rise-sexual-health-crisis-nhs-government-cuts-warning-a8383901.html>



Stages of the Disease

Stage I:

- 5-90 days after infected

Stage II:

- 6 weeks until 6 months, condylomata

Stage III:

- Complication: system of neurology, cardiovascular, musculoskeletal, multiorgan



4. Trichomoniasis



<https://www.cdc.gov/std/trichomonas/stdfact-trichomoniasis.htm>

- **Caused by protozoa (*Trichomonas vaginalis*).**
- **Attact lower part of urinary tract in male and female.**
- **Painful intercourse.**



Prevention of IMS

Primary Prevention

- Did not perform sexual activity that transmit semen, blood, or body's fluid or that cause skin to skin contact
- Having permanent partner who is not infected

Secondary Prevention

- Accurate diagnosis and treatment to the infection, prevention of complication and transmission to others.

Prevention of STIs: Counselling and Behavioural Approaches



- **Comprehensive sexuality education, STI and HIV pre- and post-test counselling;**
- **Safer sex/risk-reduction counselling, condom promotion;**
- **Interventions targeted at key populations, such as sex workers, men who have sex with men and people who inject drugs; and**
- **Education and counselling tailored to the needs of adolescents**

Counselling can improve people's ability to recognize the symptoms of STIs and increase the likelihood they will seek care or encourage a sexual partner to do so. Unfortunately, lack of public awareness, lack of training of health workers, and long-standing, widespread stigma around STIs remain barriers to greater and more effective use of these interventions.

WHO (2016)

Prevention of STIs: Barrier Methods



- **When used correctly and consistently, condoms offer one of the most effective methods of protection against STIs, including HIV.**
- **Female condoms are effective and safe, but are not used as widely by national programmes as male condoms.**

WHO (2016)

2

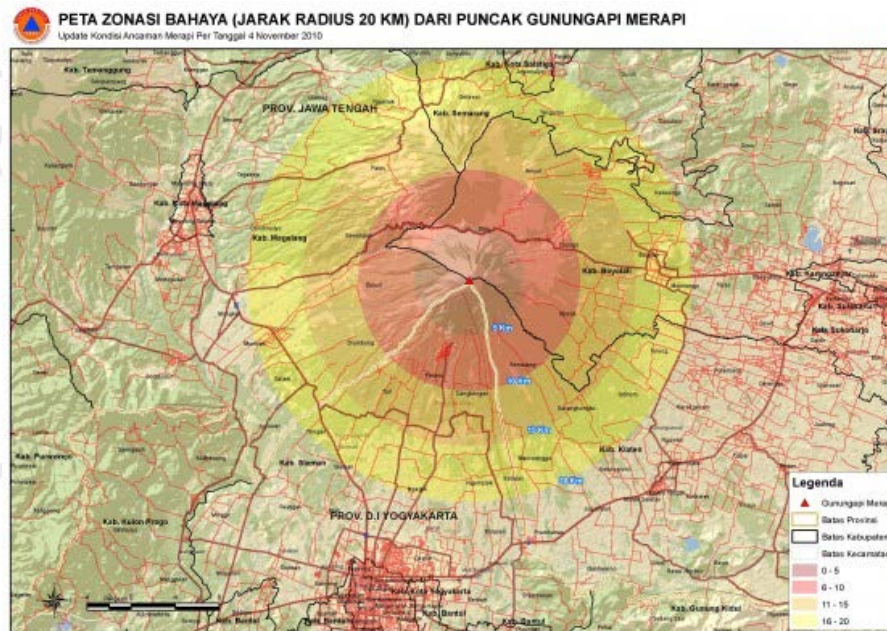


STI in Disaster Situation



The Eruption of Mount Merapi

- The eruptions on 26 October 2010 started at 17:02 PM. It was classified as an *explosive* event with volcanic bursts of ejected material, visible flame and hot air flows.
- On 3 November heat clouds travelled up to 10 kilometres. The shelters were moving to 15 kilometres.
- Merapi erupted early on Friday 5 November 2010 and the government extended the safety zone to 20 kilometres.



<http://geospasial.bnppb.go.id/2010/11/05/peta-zona-bahaya-merapi-radius-20-km/>



Profile of Mount Merapi

- Since 1548, has erupted for 69 times
- The youngest mountain in the south part of Jawa Island and located in subduction zone of Australia-Indo plant and Eurasia
- Height: 2,968 m
- Type: stratovolcano
- Latest eruption: 2006



Effect of Disaster

Positive

Tourism

Abundant source
for sand and
stone

Negative

Damage of public
facilities and
buildings

Health problems →
including STIs

Habibullah, 2015; Mulyowati & Shanti, 2016
Kumalawati, 2014; Aditya & Ambarwati, 2010; Nuruniyah,
2014



Prevention and Control of Sexually Transmitted Diseases in Emergencies

- During emergencies, changes in the behavior and emotional condition of people reflects the need to relieve tensions which build up while the emergency continues.
- Sexual gratification is a relatively common way for some adults to relieve stress.
- Studies show that at high levels of tension and anxiety, the search for sexual activity can become compulsive → acts of sexual aggression, directed chiefly against women, children, the elderly, and handicapped persons.
- It can occur in the home, in public, or in shelters or temporary refuges.

https://www.paho.org/disasters/index.php?option=com_content&view=article&id=740:recommendations-for-the-prevention-and-control-of-sexually-transmitted-diseases-in-emergencies&Itemid=0&lang=en

Activities in the Preparation of Emergency Responses



- Intensify the promotion of protective measures → during emergencies the risk of contracting sexually transmitted diseases increases, and also on how to take appropriate protective measures.
- Confirm the existence of and promote the ongoing application of national standards for the prevention, control, and clinical care of cases of sexually transmitted diseases, including HIV/AIDS.
- Confirm the availability and adequate distribution of latex condoms and water-soluble lubricants both in medical units, and in shelters and temporary refuges.
- Determine the need for such drugs and supplies as are required to provide for at-risk areas.

https://www.paho.org/disasters/index.php?option=com_content&view=article&id=740:recommendations-for-the-prevention-and-control-of-sexually-transmitted-diseases-in-emergencies&Itemid=0&lang=en



- **Confirm that medical units are able to give special attention to prenatal care and delivery for pregnant women infected with HIV/AIDS.**
- **Insofar as possible, establish health care services with trained staff in the shelters and temporary refuges.**
- **Promote the provision of water containers and disinfection supplies, in such a way as to provide for female personal hygiene.**
- **Take the precautions needed to ensure the availability of safe blood stocks for obstetric care and traumatological emergencies.**
- **Ensure that educational supplies are available at all times concerning reproductive health activities, so can be drawn on for health promotion activities if needed.**

https://www.paho.org/disasters/index.php?option=com_content&view=article&id=740:recommendations-for-the-prevention-and-control-of-sexually-transmitted-diseases-in-emergencies&Itemid=0&lang=en

The Effect of the Hurricane Katrina Disaster on Sexual Behavior and Access to Reproductive Care for Young Women in New Orleans (Patricia et al, 2007)



TABLE 2. Sexual Behavior and Access to Care for Adolescent and Young Women in New Orleans Pre- and Post-Katrina (N = 55)

Behavior	Pre-evacuation, n (%)	Post-evacuation, n (%)	P
Not currently using any form of birth control	6 (11)	22 (40)	0.001
Attending family planning services	55 (100)	22 (40)	0.001
Douched >1/mo	8 (15)	1 (2)	0.03*
Unusual vaginal odor or discharge	24 (44)	9 (16)	0.001
>1 sex partner	13 (24)	5 (9)	0.04
Unintended pregnancy as a result of lack of access to care	0 (0)	2 (4)	0.25*

*Per 2-tailed Fisher exact test.



Systematic review of the evidence on the effectiveness of sexual and reproductive health interventions in humanitarian crises (Warren et al, 2015)

Evidence of effectiveness was available for the following interventions:

- **impregnated bed nets for pregnant women,**
- **subsidised refugee healthcare,**
- **female community health workers, and**
- **tiered community reproductive health services.**



3

The Education of STI Prevention for Youth in Indonesia



Outline

- **Review the current condition of youth in Indonesia,**
- **Research related to STI among youth,**
- **Several strategy to educate STI prevention for youth**



Current Condition of Youth in Indonesia



Youth in Indonesia

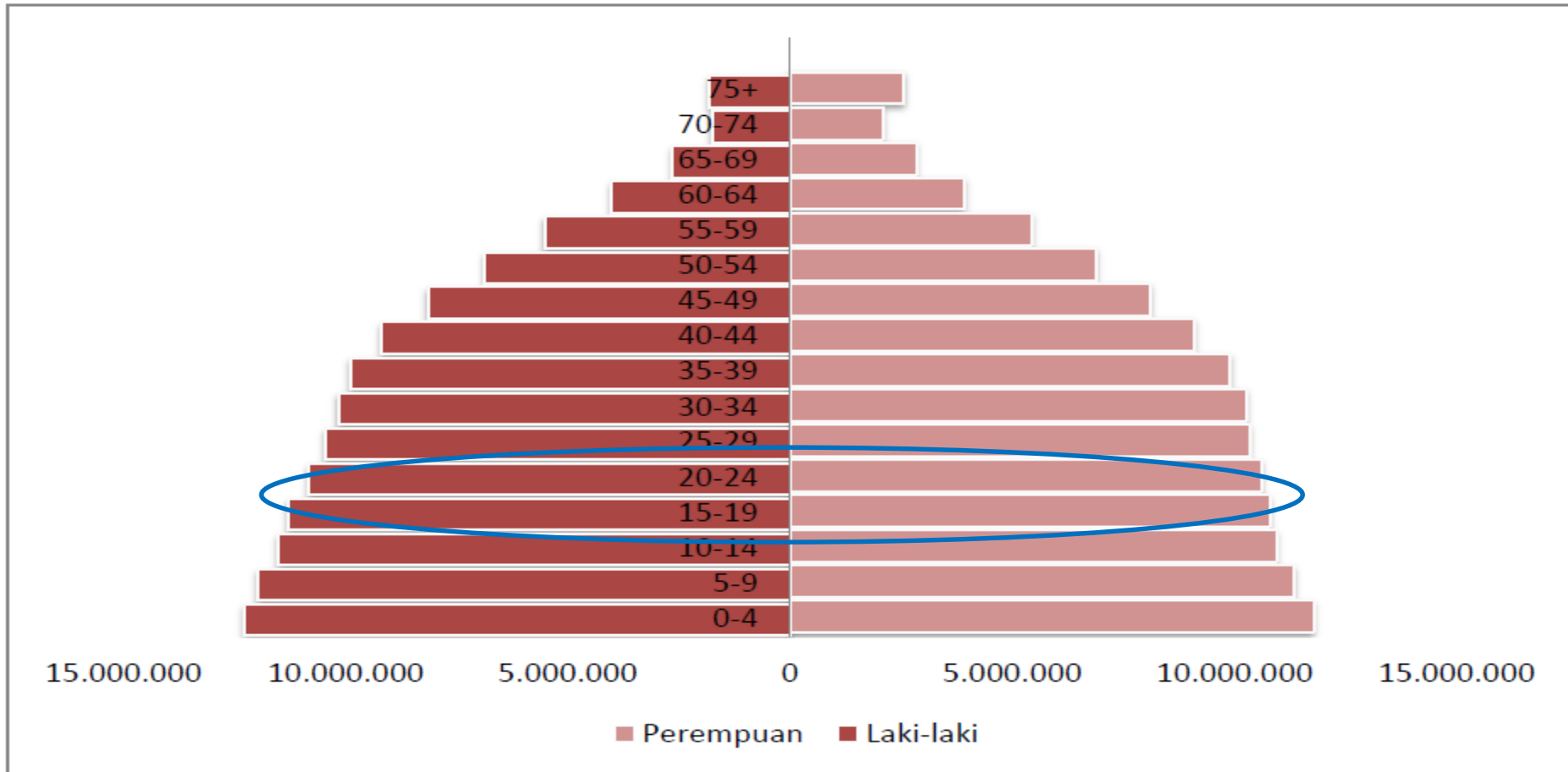


- Young generation play an important role in the development of a country.
- Any health problems that occurred during youth period, such as in the case of Sexually Transmitted Infection (STI), could affect future condition of the youth and the country.



Indonesia Population Pyramid 2015

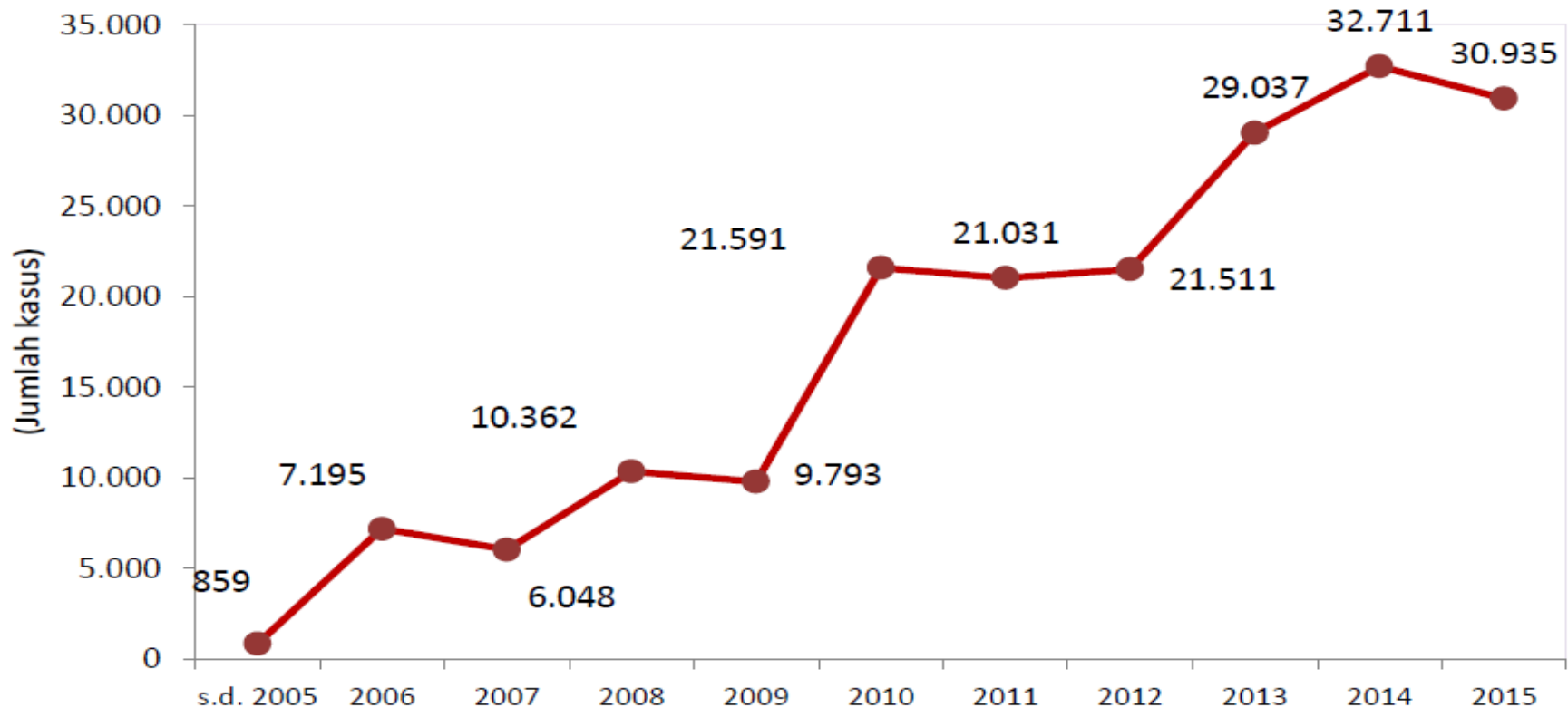
Total estimated population: 255.461.686
Total estimated number of youth: 40.000.000



Pusat Data dan Informasi, Kemenkes RI, 2015, Hasil Estimasi



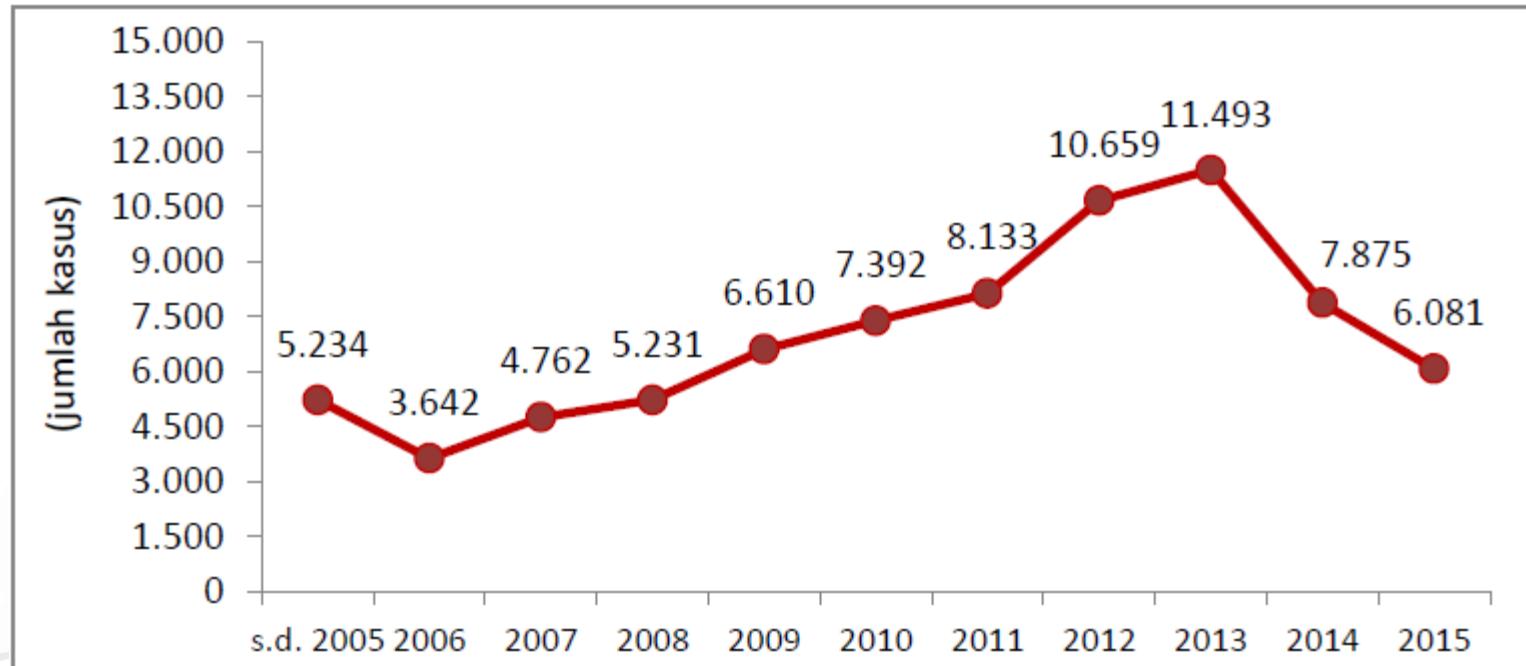
Number of New HIV Positive



Ditjen P2P, Kemenkes RI, 2016



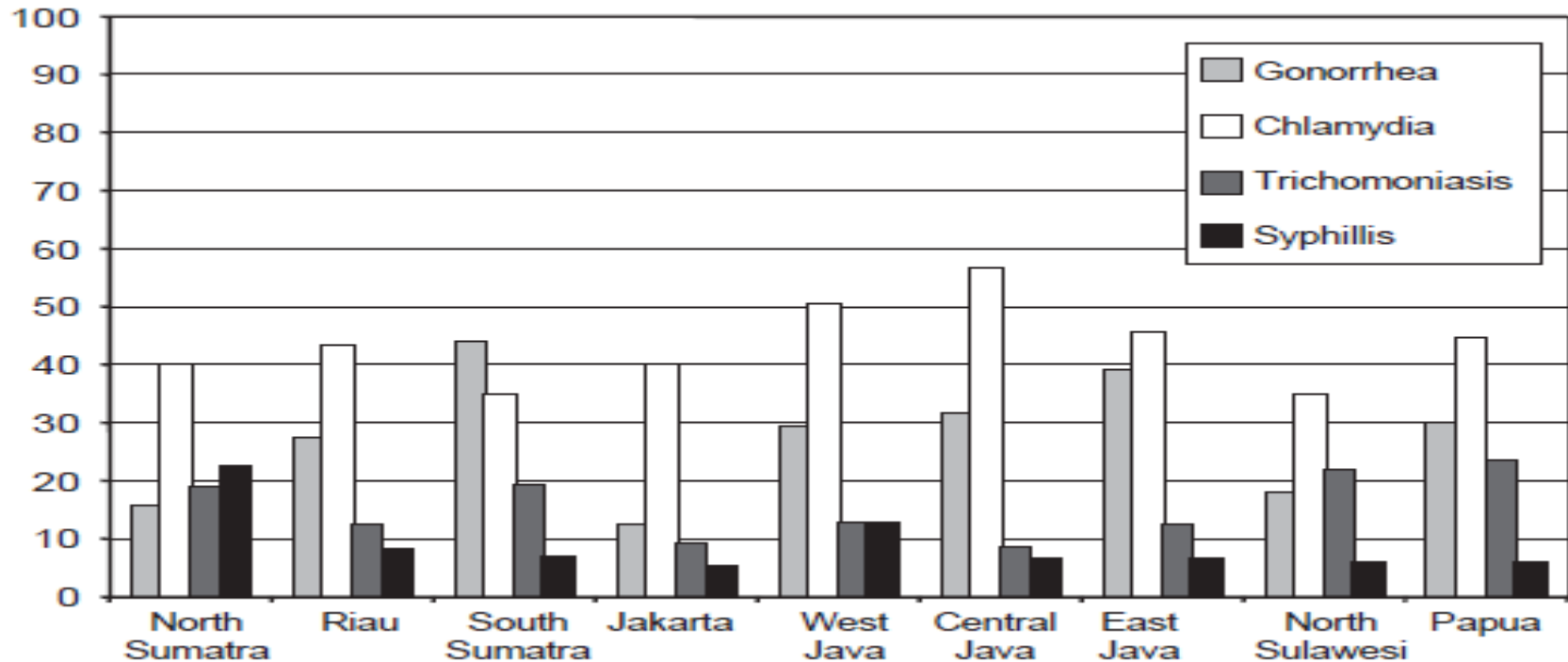
Number of New AIDS Case



Ditjen P2P, Kemenkes RI, 2016



The Prevalence of Gonorrhea, Chlamydia, Trichomoniasis and Syphilis



Tanudyaya F, et al. Prevalence of Sexually Transmitted Infections and Sexual Risk Behavior among Female Sex Workers in Nine Provinces in Indonesia, 2005. Southeast Asian J Trop Med Public Health, Vol. 41 No. 2, March, 2010



The Prevalence of STI in Post Disaster Area (Permanent House of Jelapan and Kuripan, Yogyakarta, September 2016)

No	Type	Total (%)
1	Hypertension	65%
2	Common cold/acute nasopharyngitis	25%
3	Diabetes mellitus	7%
4	Sexually Transmitted Infections (STIs)	3%
	Total	100%

Dwianantoaji et al (2016)



Never Married Men and Women Age 15-24 who Have Heard of STI, Indonesia 2012

Sex/ Age	HIV/ AIDS	Syphilis	Gonorrhea	Condylomata	Chancroid	Chlamidia	Candida	Genital herpes
Men								
Age 15-19	82.9	88.5	20.2	0.7	0.1	0.4	0.3	2.6
Age 20-24	87.8	94.8	16.7	0.9	0.6	0.9	0.8	5.2
Women								
Age 15-19	87.6	77.5	36.0	0.6	0.5	2.4	1.1	12.9
Age 20-24	92.7	82.4	34.5	4.1	1.4	2.3	3.3	16.5

Indonesia Demographic and Health Survey 2012

Source of Information about STI



Women

- School/teacher (65%)
- Television (23%)
- Friends/relatives (22%)
- Internet (13%)

Men

- Friends/relatives (51%)
- School/teacher (48%)
- Internet (15%)

- ✓ The use of internet as a source of information is increasing compared with the result of similar survey in 2007
- ✓ The Internet can be utilized as an effective tool to promote health awareness among adolescents Vs careful control of the content to avoid misconception

Indonesia Demographic and Health Survey 2012



Research related to Reproductive Health and STI among Youth

Life Experience of Fertile Age who Sexually Active in Using Contraceptive Method in Yogyakarta, Indonesia*)



Indonesian Family Planning Association in Yogyakarta reported that 10% of the youth in Yogyakarta have experience of sexual intercourse.

*Junitasari R, Hapsari ED, Lismidiati W. Life Experience usia subur yang aktif Secara seksual dalam penggunaan kontrasepsi di Indonesia. Jurnal Persatuan Perawat Nasional Indonesia, Volume 1/No. 1/April-Juli 2016



Methods

- **Qualitative research with phenomenological design.**
- **Location: Pajangan subdictrict, Bantul District, Yogyakarta**
- **Data collection: December 2013-October 2014.**
- **Five male participants, age 17-20 years old 3 participants, age 20-24 years old 2 participants; selected by snowball sampling.**
- **The data collection is done by in-depth interviews.**
- **Data was analyzed with using Colaizzi method.**
- **Ethical permission granted from the Ethic Committee, Faculty of Medicine, Universitas Gadjah Mada**

Results



Frequency and the occurrence of sexual intercourse

Sexual partner in sexual intercourse

Internal and external influence in practising sexual intercourse

Effects felt after sexual intercourse

Effect of health education in the needs of practising sexual intercourse

Condom as the main contraceptive method in practising sexual intercourse

Effect of Health Education in The Needs of Practising Sexual Intercourse



Categories
Start to think when Sekarang jadi berfikir kalau ingin melakukan hubungan seksual
Health education seminar about reproductive health is given so that the adolescence afraid of the negative effects of it
Feeling afraid that their partner would get pregnant or suffering from sexually transmitted infection when they were practising sexual intercourse
Knowledge about reproductive health is limited to pregnancy and sexually transmitted disease only
Feel curious because there is gap between what they received in the health education seminar with what they heard from friends

“Yes,... what was done at school I think it was good enough,...but...what should I say... about sexually transmitted disease, how to describe it?... If too often did that, there would be an effect... then the transmitted disease could be transmitted from that lip kissing...” (X1)

“sometimes if doing that (health education seminar), it makes me afraid... because I did not know that the effect would be like this...like this... from did not know anything... becomes knowing about it... “ (X1)

“iya.. mungkin seperti yang dilakukan di sekolah itu sudah lumayan baiklah.. Cuma apa ya.. kalau penyakit seks menular itu digambarkan seperti bagaimana.. kalau keseringan melakukan itu ada dampaknya.. terus penyakit menular bisa melalui dari ciuman bibir itu..” (X1)

“kadang kalau begitu malah jadi takut.. soalnya kan belum tahu yang itu akibatnya jadi seperti begini.. seperti begini.. begitu.. belum tahu.. jadi tahu..” (X1)

Effect of Health Education in The Needs of Practising Sexual Intercourse



Categories

Start to think when Sekarang jadi berfikir kalau ingin melakukan hubungan seksual

Health education seminar about reproductive health is given so that the adolescence afraid of the negative effects of it

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Knowledge about reproductive health is limited to pregnancy and sexually transmitted disease only

Feel curious because there is gap between what they received in the health education seminar with what they heard from friends

“Yes, at that time I was not mature, I am afraid that my partner got pregnant or what... or for those who ever did that (sexual intercourse) I heard there was (sexually transmitted disease... yes, that was I afraid of... “ (X1)

“ya kan waktu itu belum dewasa, takutnya ceweknya hamil atau bagaimana.. atau sama yang udah pernah kayak gitu kan katanyakan ada penyakit-penyakit menular itu.. ya itu, takutnya...” (X1)

Effect of Health Education in The Needs of Practising Sexual Intercourse



Categories
Start to think when Sekarang jadi berfikir kalau ingin melakukan hubungan seksual
Health education seminar about reproductive health is given so that the adolescence afraid of the negative effects of it
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Feel curious because there is gap between what they received in the health education seminar with what they heard from friends

“Yes, I know... for example change partner (many times) I could suffered from diseases such as HIV, AIDS, Syphillis,... then if the partner got pregnant is also a risk...” (X4)

“ya tahu sih mbak.. seperti kalau gonta-ganti cewek bisa kena penyakit seperti HIV, AIDS, shipilis.. terus kalau ceweknya hamil kan juga resiko..”(X4)

Effect of Health Education in The Needs of Practising Sexual Intercourse



Categories

Start to think when Sekarang jadi berfikir kalau ingin melakukan hubungan seksual

Health education seminar about reproductive health is given so that the adolescence afraid of the negative effects of it

Feeling afraid that their partner would get pregnant or suffering from sexually transmitted infection when they were practising sexual intercourse

Knowledge about reproductive health is limited to pregnancy and sexually transmitted disease only

Feel curious because there is gap between what they received in the health education seminar with what they heard from friends

“as for me... I got those kind of seminars, it makes me curious... really curious” (X3)

“I felt curious to know... teacher taught about that topic... that was just a theory... there was no practice... so I practice it by myself...hahaha.... Then I found there was a difference with what was told by my friends”(X5)

“ya kalau aku sendiri sih mbak.. dapet seminar kayak gitu malah kayak gitu itu memancing rasa penasaran e mbak.. jadi tambah penasaran..” (X3)

“ya penasaran aja sih mbak.. kan guru menerangkan materi nih.. itu kan cuma teori.. kan enggak ada prakteknya.. nah ya sudah dipraktekkan sendiri.. hahaa.. terus juga kok beda dengan apa yang diceritakan sama teman-teman..” (X5)



On Going Research Work

- **Knowledge of STI among high school students living in disaster and non disaster prone area**
- **Researchers: Elsi Dwi Hapsari, Nyoman Rani, Nur Hasanah, Anisah Ramadhani, Vini Normalitasari, Nuring Pangastuti**



Strategy to Educate STI Prevention for Youth

Strategy to Educate STI Prevention for Youth in Indonesia



- **Care for Adolescent Health Services (PKPR) /Pelayanan Kesehatan Peduli Remaja (PKPR) in Public Health Center since 2003 for adolescent age 10-18 years old.**
- **Criteria for Public Health Center to conduct PKPR:**
 - 1) **Able to supervise minimum one school (public school, religion-based school) to conduct activity related to communication, information and education about reproductive health minimum 2 times a year**
 - 2) **Training adolescent health cadre at school minimum 10% of total number of students**
 - 3) **Providing counseling to all students who contact with the PKPR staffs**



Future Planning

- **Different approach of STI prevention between men and women**
- **More research to provide evidence-based practice that related to the education to prevent STI with sensitivity to the social and cultural aspect**
- **Research collaboration**



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Thank You



