NAME _____ DATE _____

Disease Intervention Information

Malaria Intervention Information Sheet

Intervention	***Drug treatment to prevent infection***	***Insecticide-treated nets***	***Health education and counseling***	***Switching antimalerial medications***
Description	*Medications that are normally used to treat malaria infection can also prevent infection.*	*Nets that are sprayed with insecticide and draped over beds and windows repel and kill mosquitoes that might be carrying Plasmodium.*	*Provides information through newspapers, radio, or television on ways to prevent and treat malaria*	*When drug resistance is found, public health policy recommends new medication regimens.*
Drawbacks	*Does not provide 100% protection* *People must take the correct dosage of drugs for the recommended time and still must avoid mosquito bites.* *Selection of medication depends on region where malaria was contracted and if the* Plasmodium *is resistant.* *The drugs might cause side effects, including nausea, blurred vision, and mouth ulcers.* *Some patients have drug allergies.*	*Nets must be re-treated periodically.* *Mosquitoes might develop resistance.*	*Asks people to act according to recommendations*	*New medications may be more expensive.*
Target population	*All ages*	*All ages*	*All ages*	*All ages*
Health infrastructure needed	*Pharmacies and physicians* *O*	*Distribution of nets* *O*	*Media, community public health officials, volunteer health care workers* *O*	*Surveillance of mosquitoes and effectiveness of medications to determine resistance. Development of new drugs and research on changes in drug combinations.* *O O O*
Relative cost per person	*$ $*	*$*	*$*	*$ $ $*

Infrastructure level: O = low OOOO = high ***Relative cost: $ = low $$$$ = high***

NAME _____ DATE _____

Disease Intervention Information (continued)

Tuberculosis Intervention Information Sheet

Intervention	*Vaccination*	*Antibiotics*	*Treating multiple drug resistance (MDR) with several different antibiotics*	*Screening*	*Education programs*
Description	*A shot is administered that triggers the body to build up resistance to TB. This prevents infection with TB.*	*Patients with latent and active TB take a long course (6–12 mos) of antibiotics to eliminate TB infection.*	*Patients with a TB strain that is resistant to the traditional antibiotics are given a mixture of two or three different antibiotics.*	*TB skin test for latent and active disease* *Chest X-ray*	*Pamphlets, commercials, and billboards are posted encouraging people to cover their mouth when they cough, watch for signs of TB, and to visit a doctor if they suspect they have the infection. This reduces the spread of TB and helps people get treatment as soon as possible.*
Drawbacks	*People vaccinated for TB will have false positive results for the TB test.* *The vaccine is not effective in adults.*	*Often people stop taking the antibiotics when they feel better. This reduces the effectiveness of the intervention, and allows disease microbes to possibly develop drug resistance.*	*The antibiotics can cause unpleasant side effects.* *Often people stop taking the antibiotics when they feel better. This reduces the effectiveness of the intervention, and allows disease microbes to possibly develop drug resistance.*	*False positive skin tests can lead to treatment of people who do not have latent infections.*	*People must follow the recommendations in order for them to be effective.*
Target population	*Children under age 15*	*Anyone who has latent or active TB*	*Anyone with MDR TB*	*Anyone who comes in close contact with a person who has TB*	*Everyone*
Health infrastructure needed	*Health care workers to administer vaccine* *O O O*	*Pharmacies, clinics and health care workers to administer drugs* *O O O*	*Pharmacies, clinics and health care workers to administer drugs.* *O O O*	*Surveillance, highly trained health workers to evaluate the tests, good quality labs, clinics to provide screening* *O O O*	*Health providers can deliver education in various settings* *O*
Relative cost per person	*$ $*	*$ $ $ $*	*$ $ $ $ $*	*$ $*	*$*

Infrastructure level: O = low OOOO = high ***Relative cost: $ = low $$$$ = high***

NAME _____ DATE _____

Disease Intervention Information (continued)

Diabetes Intervention Information Sheet

Intervention	***Insulin injections for Types I and II, diabetes pills to reduce blood glucose in Type II***	***Lifestyle intervention programs***	***Education***
Description	*Insulin and diabetes pills lower blood glucose levels when the body's insulin is absent or at low levels*	*Programs to support and monitor low-calorie, low-carbohydrate diet and promote physical activity* *Lifestyle changes may prevent or reverse Type II diabetes in people who have no complications of the disease.*	*Health education to help people understand the facts about diabetes and its treatment, how to identify emergency medical problems early, and how to improve lifestyle habits*
Drawbacks	*Patients must inject themselves with insulin every day—and sometimes more often. Patients might avoid taking medications.* *Patients may still have complications and damage to various organs and systems.*	*It's difficult for people to change their habits.* *Medication might still be needed.*	*People must follow the recommendations in order for them to be effective.*
Target population	*People with Type I diabetes and Type II diabetes, all ages*	*People with high blood glucose levels or diagnosed Type II diabetes with no complications* *Patients living with either Type I or Type II*	*People with Type I and Type II diabetes*
Health infrastructure needed	*Pharmacies, labs, physicians, needle disposal sites, access to emergency medical services* *O*	*Trained people to run the program* *O O O*	*Health providers can deliver education in various settings* *O*
Relative cost per person	*$*	*$ $ $*	*$*

Infrastructure level: O = low OOOO = high ***Relative cost: $ = low $$$$ = high***

NAME _____ DATE _____

Disease Intervention Information (continued)

HIV/AIDS Intervention Information Sheet

Intervention	*Antiretroviral therapy*	*Tuberculosis co-infection treatment*	*Education*
Description	*A treatment by which a combination of antiretroviral drugs works to disable the retroviruses in a patient before they infect more of the patient's cells and replicate. These medications prolong the lives of people with HIV/AIDS. For pregnant women who have HIV, the drugs prevent transmission of the virus to the child during pregnancy, labor, and breastfeeding.*	*People with HIV/AIDS often become infected with TB as well. This secondary infection can be fatal. Co-infection treatment provides a full course of antibiotics to those infected with both HIV/AIDS and TB.*	*This intervention offers classes and distributes educational information about ways to reduce one's chances of contracting or spreading HIV/AIDS. These include using condoms, substituting formula for breast milk, following universal precautions when working with blood, and convincing drug addicts to not share needles. This helps to reduce the number of new cases and the spread of the disease.*
Drawbacks	*The drugs can have side effects.* *Drug resistance develops because the virus mutates at a high rate, especially if the patient does not take the drugs as prescribed.*	*People might stop taking the antibiotics when they feel better. This reduces the effectiveness of the intervention, and allows disease microbes to possibly develop drug resistance.*	*People must follow the recommendations for them to be effective.*
Target population	*Patients who test positive for HIV*	*Those infected with HIV/AIDS and who test positive for TB*	*All ages*
Health infrastructure needed	*Pharmacies, clinics and health care workers to administer drugs* *O O O*	*Pharmacies, clinics and health care workers to administer drugs* *O O O*	*Health providers and community volunteers can deliver educational programs in various settings.* *O*
Relative cost per person	*$ $ $ $ $ $ $ $ $*	*$ $*	*$*

Infrastructure level: O = low OOOO = high ***Relative cost: $ = low $$$$ = high***

NAME _____ DATE _____

Disease Intervention Information (continued)

Cancer Intervention Information Sheet

Intervention	*Vaccination for microbes (for cervical cancer only)*	*Public programs*	*Screening for cancer*	*Treatment*
Description	*Cervical cancer: Human papillomavirus (HPV) vaccine protects against the sexually transmitted HPV that can lead to cervical cancer.*	*Cervical cancer: Programs to educate women and men about the HPV virus that can lead to cervical cancer and the vaccine available to prevent infection by HPV* *Skin cancer: Programs to educate people about the risks of sun exposure and showing what signs of skin cancer to look for*	*Cervical cancer: Tests done during regular physical exams detect abnormal tissue* *Skin cancer: During regular physical exams primary care providers look for odd moles or lesions. Those with previous history are screened regularly.*	*Cervical cancer: Surgery removes cancerous cells or the uterus; chemotherapy or radiation targets cells that may have spread.* *Skin cancer: Surgery to remove cancer cells and some surrounding tissue; chemotherapy or radiation if cancer has spread to certain other parts of the body; topical chemotherapy or freezing/burning treatment to remove precancerous lesions*
Drawbacks	*Vaccination must be refrigerated.* *Vaccination must be administered before person is sexually active.*	*People must follow the recommendations in order for them to be effective.*	*Millions of people do not have access to regular primary care*	*Cervical cancer: chemotherapy or radiation kills normal cells in addition to cancer cells; can cause side effects.* *Skin cancer: chemotherapy or radiation success rates are relatively low*
Target population	*Women starting at age 11 or 12*	*Cervical cancer: women starting at age 16* *Skin cancer: teenagers and adults*	*Cervical cancer: women starting at age 16* *Skin cancer: adults in their 20s and older, especially those with previous history*	*Patients with cervical or skin cancer*
Health infrastructure needed	*Health care workers to administer vaccine* *O O O*	*Advertising and marketing agencies* *O*	*Doctors to perform biopsies of abnormal tissue, high-quality labs to evaluate tissue, doctors/clinics* *O O O O O*	*Hospitals/clinics; surgeons and cancerspecialists; skilled health care workers to administer radiation/chemotherapy* *O O O*
Relative cost per person	*$ $*	*$*	*$ $ $ $ $ $*	*$ $ $ $*

Infrastructure level: O = low OOOO = high ***Relative cost: $ = low $$$$ = high***

NAME _____ DATE _____

Disease Intervention Information (continued)

Rotavirus Intervention Information Sheet

Intervention	*Promote breastfeeding*	*Oral rehydration therapy (ORT) or intravenous rehydration therapy (IRT)*	*Rotavirus immunization*	*Water sanitation system, community water filters*	*Hand-washing and sanitation promotion*
Description	*Health care workers encourage mothers to breastfeed children until the age of six months and give them no other food. This ensures children do not ingest water-borne vectors. Breast milk also contains antibodies.*	*ORT involves drinking a solution containing antimicrobial agents that kill the virus and that replaces fluids and nutrients. IRT therapy requires an IV in a hospital setting.*	*A vaccine builds babies' immunity to rotavirus, making them less likely to contract the disease or get a severe case of it.*	*The treatment of sewage keeps human waste out of drinking supplies and decreases exposure to water-borne pathogens.*	*An educational campaign that teaches people the importance of washing hands and other sanitary practices to reduce the spread of pathogens.*
Drawbacks	*In some areas mothers should be tested for HIV first.*	*Infants who need to be hospitalized to receive IV treatments may live in areas too far from a hospital.*	*Requires refrigeration*	*Requires long-term maintenance*	*People must follow the recommendations for them to be effective.*
Target population	*Infants 6-months old and younger, and mothers of infants 6-months old and younger*	*Anyone with a severe case*	*Babies up to 6-months old*	*All ages*	*All ages*
Health infrastructure needed	*Public health personnel* *O*	*Emergency medical personnel, hospitals and/or emergency rooms, health care workers, pharmacies* *O*	*Health care workers to administer vaccine, refrigeration* *O O O*	*O O O O O*	*O*
Relative cost per person	*$*	*$*	*$ $*	*$ $ $ $*	*$*

Infrastructure level: O = low OOOO = high ***Relative cost: $ = low $$$$ = high***