Eft4 science task 3

Childhood Inoculations Childhood inoculations are vaccines taken by young ones in a bid to protect them from contracting a disease through preparation of the body to fight an illness. Each vaccine has a weakened or dead germ which causes a certain disease. The disease is fought by the body through the creation of antibodies which can tell the parts of a particular germ. Exposure to the disease finds the antibodies in place and the body ready to conquer the infection thus creating a permanent response such that a child does not get sick also referred to as immunity.

Vaccines are the best shield against sickness since they are effective in 85-99% of cases since they significantly lessen children’s risk of serious disease especially when given to masses thus providing an unsuitable environment and less opportunity for an illness to spread in such a population.

According to CDC recommendations, they provide vaccines for seventeen preventable diseases which cater for children, infants, teenagers and adults. Vaccines work best when administered to children because of the high risk factors. Some products necessitate more than two doses to get the right antibody response for instance tetanus and diphtheria toxoids. The function of polysaccharide vaccines is emphasized when conjugated with a protein carrier by inducing the T lymphocyte which is a dependent immunological role. Live and attenuated virus vaccines stimulate the neutralizing of antibodies and cell mediated immunity resulting in prolonged immunity.

Routine vaccination for children is scheduled for administration according to recommended ages and spacing between multi dose antigens doses to offer maximum protection. However the vaccination providers have a flexible option for certain situations such as fallback on schedule or international travel which use an accelerated schedule implemented through shorter

spacing than the recommended ones though the end result is the same; protection for the child.

A child after the first year of life could have gotten nine injections; pediatric diphtheria and tetanus toxoids and acellular pertussis [DTaP], varicella, hepatitis A, hepatitis B, inactivated poliovirus [IPV], pneumococcal conjugate vaccine [PCV], influenza, Hib and MMR vaccines. The number of injections has no specific limit so the vaccine provider can be flexible to make sure the administration of main doses does not have too many injections per visit. Administration of the hepatitis B and the triple dose of IPV can be given before the first birthday to lessen the number of injections between one and one and a half years of the child's life.

Combination vaccines bring together equal component vaccines to singular products in prevention of more than one sickness or protection against many strains of infectious agents bringing the same illness. These vaccines have more weaknesses than strengths. to begin with effects occur after administration more often with combination vaccines than separate antigens such as the measles, mumps, rubella and varicella (MMRV) vaccine. They also cause confusion in choosing of vaccine schedules and combinations particularly when administered by different providers who could be using different products. They offer lessened immunity of one or more components and surplus doses of antigens in the fixed product. Finally the combination vaccines have a very short lifespan compared to the single component vaccine counterparts. On a brighter note, they offer a better economic value if the missed or postponed vaccinations, handling and storage and direct and indirect costs of extra injections are taken into account.

Precautions and contraindications are states in which vaccines cannot be

administered which could be in reaction to the vaccine given. A contradiction is a recipient condition that higher the risks of grave adverse effects for instance severe allergic reaction while a precaution is a recipient condition that compromises vaccine ability to give immunity which could prove fatal to a child. Vaccines ought to be postponed incase of a precaution or acute illness however it might be considered if the protection benefits outweighs an adverse reaction risk.

Vaccination also carries the risk of disease though quite little. Immunizations from attenuated viruses such as chickenpox (varicella) might get a child a mild form of the sickness but is usually less severe than when infected by the disease causing virus. The vaccines might create problems for children with weakened immune systems such as cancer kids.

The vaccination programs have contributed to the elimination of vaccine preventable illnesses and lessened several others. Most people believe inoculations are the preserve of children but they are for people of all ages though children are the most risky age group. The shots may be painful but it’s only for the short term which outweighs the pain of coming down with a deadly disease which could be preventable. As they say prevention is better than cure and it is advisable to introduce a child from birth.

References

Kroger, Andrew T et al. (2011). General recommendations on immunizations: recommendations

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