Written evidence from Lee Booth (MBV0012)

Appendix 2

Case Study 1 - Emma - Age 3 - Cost to NHS £3,161,944

Emma was 3 years old when her mother took her to the GP with a fever, seizures and reduced consciousness. She was rushed to hospital via 999 ambulance. From the Emergency department she was transferred to the paediatric intensive care unit (PICU) of the regional tertiary centre by a retrieval team. She had raised intracranial pressure and intractable seizures and required ventilation and intubation. Acute hydrocephalus was immediately treated by insertion of an external ventricular drain and later by insertion of a shunt. She required prolonged airways management for neurological complications, including repeated seizures. Emma spent 26 days in PICU. Once stable she was transferred to a paediatric ward where she spent five months recovering and undergoing specialist neurological rehabilitation under the care of the brain injury rehabilitation team.

The total cost of the acute episode within this scenario, which includes visiting the GP, ambulance transfer, A&E investigations, Paediatric critical care transportation, 26 days in a PICU bed, hospital provider spell, CT scan, MRI scan, and rehabilitation for brain injuries on a paediatric ward for 150 days, is a huge £131,670. The list of costs goes on, and on. The above figure is only a small amount highlighted from this particular case study. Emma went on to require lifelong treatment under the NHS and other services including educational and social services. As well as many other disabilities that Emma was left with as a result of meningitis, she was also left profoundly deaf, and was urgently referred for bilateral cochlear implantation. Cochlear implants have to be inserted without delay to be successful after meningitis. Following the initial implant operation, she became a lifelong outpatient of the implant centre for regular care and technical support. The lifelong cost of this alone is £271,247 and the total lifelong costs for this child to be treated under the NHS and other services for meningitis and the devastating effects that this had on her is a massive £3,161,944. That is the cost of 42,159 meningitis B vaccines.

Case Study 2 - Peter - Age 1 - Cost to NHS £2,738,550

Peter was 12 months old when he visited the GP with a fever and a rash and was subsequently rushed to hospital with suspected meningococcal disease. He was taken to the Emergency department by ambulance and from there transferred to PICU by a retrieval team. Peter spent 31 days in PICU with severe septic shock, acute respiratory distress syndrome and renal failure. He also developed gangrene of the limbs due to purpura fulminans. His respiratory and renal problems were resolved in PICU, and he was transferred to a paediatric ward where he needed both legs amputated above the knee and one arm below the elbow. After the initial amputations, Peter had to return to theatre several times for tissue debridement and dressing changes under anaesthetic. Once his wounds had begun to heal a little, Peter also underwent various skin grafting operations to repair damaged skin on his remaining limbs. In total he was in hospital for 6 months.

The total cost of the acute episode within this scenario, which includes visiting the GP, ambulance transfer, A&E investigations, Paediatric critical care transportation, 31 days in a PICU bed, hospital provider spell, CT scan, MRI scan, and amputations on a paediatric ward with the implications and support that goes with this for 150 days, is a huge £151,651.
Peter was discharged from hospital at 18 months old, and went on to become a lifelong outpatient of a Disablement Service Centre which provides prosthetic limbs, a consultant in rehabilitation medicine, a prosthetist, a physiotherapist, an occupational therapist and a counsellor. The lifelong costs of this service is £55,046.

Peter requires a lifelong supply of prosthetics, which need changing regularly to assist with Peters growth. The lifelong cost of this is £655,024. He also requires community health support (£12,925), specialist equipment (£27,630), corrective surgery (£33,045), and additional educational costs (£206,769).

Around the time he started school, Peter began to display difficult behaviour, possibly due to the physical effects of the illness on his brain or to the trauma of his illness and stress of living with disabilities. He was referred by the community paediatrician to CAMHS (child and adolescent mental health service) for a psychiatric assessment. Peter saw a psychiatrist every six months while at school, and took medication to help his behaviour.

Peter’s parents also had an intensive course of sessions in a parenting group. Alifelong cost of the above is £16,601.

‘Peter’s illness and resulting disabilities affected not only his life, but that of his family forever. His parents became carers, with his mum giving up a successful career as a buyer for a major retailer to look after her son, as well as caring for Peter’s sister. The family became reliant upon state support, claiming Carer’s Allowance and specialised vehicle fund as well as a state grant to have their home extensively adapted.’ This comes with a lifelong cost of £533,449. Peter is also entitled to Disability Living Allowance, Cold Weather Allowance, Mobility Allowance and additional tax credits, with a total lifelong cost of £1,046,410.

The total lifelong cost for this child to be treated under the NHS and other services for meningitis, septicaemia and the devastating side effects that come with this is a huge £2,738,550. This will provide 36,514 Meningitis B vaccines.

These figures do not even begin to touch on the thousands of children admitted to Paediatric wards each year with suspected meningitis and treated with triple antibiotic therapy. Antibiotics such as Benzylpenicillin, Ceftriaxone and Gentamicin are used to treat those suspected of contracting bacterial meningitis. A lumbar puncture also has to be undertaken. Children that are treated for this generally remain on a children’s ward for 7 days, although those confirmed to have bacterial meningitis can remain for up to 14 days. Throughout their stay, these children have to be treated with intravenous antibiotics. A minimum estimated cost for one child to be treated for 7 days for suspected bacterial meningitis is £1300, which is the cost of 17 vaccines. those children that are tested positive for bacterial meningitis that are required to stay on a Paediatric ward for an average 14 days require a minimum cost to the NHS of £2600, the cost of 34 meningitis vaccines.

This does not go on to mention the trauma that a child and their families in a scenario like this has to face. Lumbar punctures, an untold number of blood tests, long line insertions, enduring weeks of intravenous antibiotics, and a life time of disabling side effects, potential long term psychological effects on both the patient and families, all which can all be prevented with a vaccine. All information taken from the Meningitis Research Foundation Website; http://www.meningitis.org/assets/x/53379, http://www.meningitis.org/assets/x/53382.