



# HealthFusion Team Challenge

## SA HealthFusion Team Challenge – 2012

### Introduction

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Alex is a 9 year old boy living in a regional township 45 minutes outside the nearest capital city. Alex was involved in a car collision 4 weeks ago after he stepped out from behind the front of his school bus into the path of an oncoming car on his way to school. He was flung several meters and struck the left side of his head on the road when he landed. He also sustained severe gravel rash on his face and arms. Immediately after the accident he was alert but became unresponsive on the roadside. His teacher immediately called an ambulance and stabilised Alex's head and neck, as she had been taught in her school's first aid course, before paramedics arrived and prepared him for transit. Alex's younger twin brother and sister (Bailey and Claire, 7) were both still on the school bus at the time and witnessed the collision before another teacher took them away. Paramedic services transported Alex unconscious and ventilated to a paediatric hospital in his capital city where he was admitted into the ED.

Diagnostic scans revealed no obvious spinal trauma but significant head trauma - a moderate sized extradural haematoma, and bilateral frontal lesions and a left temporal-parietal focal lesion. He was immediately taken to the operating theatre for a craniotomy to drain the haematoma and was transferred to PICU for further management. While admitted he was given titrated phenytoin through his IV then orally once he was able. He was also given analgesics (paracetamol and opioids) for pain and Timentin IV and then oral Flucloxacillin for his cuts and grazes. His family were given a guarded prognosis about his future function. Alex regained consciousness within 2 days however he had minimal movement in his right arm and leg, no vocalisations and was dysphagic. After 5 days in a neurosurgical ward Alex showed enough improvement in his level of consciousness that he was transferred to the neuro-rehab ward.

### In-patient Rehab Experience

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Over the course of three weeks Alex participated in intensive rehab and regained movement in his right leg but continued to experience footdrop. He was fitted with a foot drop splint and was assessed as safe to mobilise on smooth surfaces. His right arm also improved but he regained very limited functional use of his right hand (right hand dominant). He attempted to perform activities using his left hand and found this very distressing and slow. He demonstrated some increase in muscle tone.

Alex's speech gradually improved but he experienced word finding difficulties and became tired and frustrated after a few minutes. His swallowing also improved but he was inclined to try and eat quickly and put large portions of food into his mouth.

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Alex learned to dress himself slowly with simple stretchy garments but required prompting regarding the sequence of clothing and encouragement to stay on task. He was able to manage toileting independently. Alex's mother stayed in town during his rehab phase and attended every day to work with the therapists and nurses on his rehab activities. His gravel burns improved but Alex tended to pick at the scabs and this resulted in several small areas of infection on his face.

At the end of three weeks the plan is to discharge Alex home to the care of his family.

### Financial Situation

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Alex's mother Helen (41) and father Geoff (39) both work for a local construction company – Geoff as a project manager and Helen in administration. After the accident, Helen used up her holidays and then took unpaid leave so she could be with Alex in hospital. Although Geoff's job pays well enough, the family is adjusting to living on a single income. In addition to this, the financial burden of raising a family, paying the mortgage and driving to and from the capital for weekly rehabilitation visits is causing mounting financial stress even though insurance has paid for the main part of Alex's medical fees. Geoff and Helen wonder if they can afford to keep both of their cars. The family just bought a newer model sedan and already own an old 4WD.

### Social Situation

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Alex is the oldest of three children in a close knit family based mainly in the local area. Dad Geoff's parents, Michael (66) and Judith (64) live 10 minutes away and often offer to mind the twins to help out. Helen's parents have both passed away but her sister Kathy (42) lives close by, and Helen often finds herself relying on her sister. She calls Kathy from time to time 'for a good cry' when she is feeling depressed or overwhelmed and Kathy sometimes brings around meals on the days when Helen is too tired to cook. Geoff tries to help with cooking and cleaning as much as he can, but he is not confident in the kitchen, preferring to help in other ways around the house.

Although grandparents Judith and Michael try their hardest to look after the grandchildren to give the family a break, Michael is slowly going blind due to glaucoma and both have arthritis in their knees and hands. Michael is on Pravastatin and low dose aspirin after suffering a mild heart attack three years ago. Only Judith drives, since Michael is not confident enough to take the wheel with his eyes causing him trouble. The twins have been quieter since the accident, but they do get bored easily and often say they don't want to go to 'grandma and grandpa's house' because there is nothing to do.

### Previous Health Profile

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Prior to the accident Alex was healthy, fit and outgoing. He played in his AFL club's U10 team. Alex is allergic to penicillin.

### Current Health Profile

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Alex is approaching the end of his 3<sup>rd</sup> week in the neuro-rehab ward and is preparing for discharge home to his local area.

He presents with:

- Mild R hemiplegia with increased tone in his upper limb

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- R Foot drop (improving) – Fitted with hard footdrop splint
- Cognitive impairment
- Poor hand function
- Epilepsy risk
- Communication impairment
- Dysphagia – almost resolved
- Alex is 114cms and 25kgs

### Current Medications

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On discharge Alex was prescribed:

- Phenytoin 100mg, twice a day (50mg chew tabs x2)
- Diazepam 2mg, twice a day (raised tone)
- Ibuprofen 200mg/5mL – 6ml, when needed
- Paracetamol 120mg/5ml – 15ml, when needed
- Pain stop (paracetamol 120 / codeine 5mg per 5ml) – 15ml, at night when needed

### Home Environment

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The family live in a three bedroom, two-story brick house that sits on a raised slab on a slightly upward sloping lot. There are three steps at the front of the house and the back of the house opens onto a large wooden deck with one step leading down to the spacious backyard. The family, kitchen, bathroom and dining rooms are all on the first floor and all the bedrooms are on the second floor up 14 polished wood steps. The children have a sandpit and homemade tree house at the end of the garden. The front yard is quite small and there are a set of large paver stones set into the grass leading up to the house. The gravel driveway runs up the side of the house to an adjoined carport and a side door with three steps. Most of the house has polished wooden floors, except for the bathroom which has tiles and the dining room and bedrooms which have carpet. The house's single bathroom has a bath and small separate shower.

At home all three children shared a large room together but when he comes home the parents plan to move Alex into the guest bedroom to give the twins more space. The twins were traumatised after seeing their older brother in an accident and have been having nightmares regularly since. They have since retreated from interacting with people outside their immediate group of friends and often prefer each other's company to anyone else's. All of the siblings were part of the local junior AFL club before the accident, but the twins have not been to many games since the accident. They try to help their parents as much as they can.

The family has an aging cocker spaniel Buzz, who used to spend a lot of time sleeping next to Alex. The family has noticed Buzz has begun peeing on the furniture and they wonder if he is missing Alex.

### Leisure and Social life

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Prior to the accident Alex enjoyed playing AFL. His parents bought the children a Wii game console 2 years ago for Christmas and both parents and all the children enjoy playing with it. His parents hope he will be able to use it again if his hand function improves.

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The family live close to a local farmer's market and used to visit on Saturdays but they have not been able to go recently.

Since the accident Alex has not had contact with his friends aside from one or two phone calls from school mates. Apart from his siblings and other children in the rehab ward, he hasn't had any contact with children his age. Both Helen and Geoff want to get Alex back into regular school as soon as possible, but sometimes Helen worries that the school will not be able to cope with the changes to his physical and cognitive function.

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### Your Team Role

You are a newly developed interprofessional mobile outreach paediatric team tasked with providing child and family centred care and support to children with complex needs. The neuro-rehab ward has contacted you to let you know that Alex will be discharged home by the end of the week and you will take over the management of his case.

Consider how you as a team would work together to facilitate a smooth transition from hospital to home and your likely priorities over the next 6 months.

You have ongoing access to Alex's neurologist in the city as required.

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