People involved in your recovery

**Nursing & Medical staff** will monitor your progress with regular checking of your vital signs, pain levels & arrange any investigations (x-rays &/or blood tests). They will also maintain treatments & be there for you & your family throughout your stay.

**Trauma Nurse Specialist** to ensure co-ordinated care is achieved, especially if other injuries are present, provide advice while in hospital & on discharge. Support with ACC processes is available.

If you have had surgery:

**Acute Pain Service** will ensure that your pain is within an acceptable coping level for you & will prescribe the correct pain relief to allow you to breathe & mobilise more easily.

**Physiotherapist** will assist you with deep breathing & coughing exercises to prevent complications such as chest infections. This is important because the liver lies beneath the ribs & often taking in a deep breath can be difficult in early days after injury or surgery.

**Social worker** available for support, counselling & arranging community services should you require them.

After discharge

You should not participate in any aggressive or physically active sports or activities for at least 3 months. Once the liver is fully healed it will not limit your diet, work ability, school or recreational activities.

In the few weeks after a liver injury (or surgery) if you get any sudden & new abdominal pain or increasing dizziness:

- contact your GP immediately or if necessary Dial 111 for an ambulance.

This information was compiled by the

**Trauma Services, Auckland City Hospital**

**September 2017**
The Liver is in the upper right abdominal cavity, underneath the diaphragm & on top of the stomach, intestines & right kidney. It is the largest internal body organ & weighs about 1.5kgs. It is protected by the lower rib cage on the right side. The liver has 2 main sections & a very large blood supply. Up to 25% of the body’s circulating blood is processed by the liver at any one time. It is part of the digestive system & is joined to the gallbladder & bowel by small tubes called ducts.

What does the Liver do?
The liver is essential for our survival, & is involved in many functions in the body. These include the metabolism (breakdown, change, & use) of glucose, fats, carbohydrates, protein & amino acids. It is essential for producing red blood cells & the factors which help our blood to clot. The liver also has a role in the production of hormones & cholesterol, immunity protection, maintaining blood pressure & it stores vitamins & minerals.

However, one of the liver’s main roles in the body is to help get rid of toxins & poisons – such as alcohol, drugs, medications & waste products. These are carried away by liquid bile, which is produced by the liver. This is essential for digestion.

How does it get injured?
Because of its size & location, the liver is easily injured. This can be from a direct blow to the abdomen or chest during a road or cycle crash, a fall, an assault (direct blow or stabbing) or contact sports. The liver can be torn or cut (lacerated), or crushed. Any of these injuries can cause the liver to bleed, causing a bruise (or haematoma) because it has a large blood supply.

Diagnosing a Liver Injury
An abdominal CT scan will identify a liver injury. Sometimes an emergency operation is required to control bleeding, remove the damaged or bleeding portion, & a diagnosis is made then. The severity of the liver injury is made at that time.

Treatment of a Liver Injury
The majority of liver injuries do not need surgery. Often the bleeding stops by itself. But this will depend on the type, location & severity of the injury. Other treatment may include:
- Bedrest initially, then slowly increasing mobility
- Good pain relief
- Frequent monitoring for early signs of re-bleeding.
- Daily blood tests to check clotting factors & blood count

If needed, eating & drinking may be restricted – then you will be given intravenous (I.V) fluids.

Recovery
The liver can regenerate (fully regrow) completely in approximately 6 weeks if a part has been removed during surgery. This may take a little longer if the liver is bruised or lacerated.

How long will you be in hospital?
This depends on the extent of your injury, whether you required surgery or not, or if you have other injuries.

Potential Complications
Bile leak - Depending on where in the liver the injury is, sometimes bile may leak from one of the small ducts into the abdominal cavity. This usually treated by placing a drain into the duct to allow the bile to drain correctly while the liver is healing. Another option is to place a stent (narrow tube) over the leak in the duct to allow it to drain into the bowel in the usual way. Surgery to fix this leak may occasionally be necessary. This does not mean that your digestive system or the other functions of the liver will necessarily be permanently affected, but it will slow your recovery from the injury.

Bleeding - This may be treated by a radiological (x-ray) procedure or surgery.

Please report any sudden increases in pain or dizziness while you are in hospital.