

**NURSE PRACTITIONER LIVER SERVICE**

**CLINICAL PROTOCOL 1**

**FOR THE**

**MANAGEMENT OF**

**HEPATITIS C**

The Hepatitis C Clinical Protocol has been devised for the exclusive use of the Nurse Practitioner, Liver Service, at Royal Perth Hospital. The scope of the protocol includes only patients diagnosed with Hepatitis C.

**Prepared by:**

S Nazareth  
SRN, ICU Cert, B Hlth Sc, M App Sc,

**Authorised by:**

*Clinical Protocol Advisory Panel*

Dr Wendy Cheng, Head of Liver Service  
Dr Jim Flexman, Microbiologist  
Dr Richard Herrmann, Head of Haematology  
Dr Jim Anderson, Radiologist  
Mr Barry Jenkins, A/Chief Pharmacist  
Ms Linda Brearley, A/Director of Nursing  
Ms Theresa Williams, Nursing Research  
Ms Mary Wright, Consumer

**Date:**

**20<sup>th</sup> July 2004**

## PROTOCOL 1

### MANAGEMENT OF HEPATITIS C

#### THE CLINICAL PROTOCOL DEVELOPMENT PANEL

1. Name: **Dr Wendy Cheng**      Position: Head of Liver Service  
Professional Qualification: MBBS, FRACP, MD  
Organisation: Royal Perth Hospital      Signature:
2. Name: **Dr Jim Flexman**      Position: Microbiologist  
Professional Qualification: MBBS, FRCPA, PhD  
Organisation: Royal Perth Hospital      Signature:
3. Name: **Dr Richard Herrmann**      Position: Head of Haematology  
Professional Qualification: MBBS, MRACMA, FRACP, FRCPA  
Organisation: Royal Perth Hospital      Signature:
3. Name: **Dr Jim Anderson**      Position: Radiologist  
Professional Qualification: MBChB, FRACR  
Organisation: Royal Perth Hospital      Signature:
4. Name: **Mr Barry Jenkins**      Position: A/Chief Pharmacist  
Professional Qualification: B Pharm  
Organisation: Royal Perth Hospital      Signature:
5. Name: **Ms Linda Brearley**      Position: A/Director of Nursing  
Professional Qualification: RN, ICU Cert, BEc  
Organisation: Royal Perth Hospital      Signature:



Royal Perth Hospital

6. Name: **Ms Theresa Williams** Position: Nursing Research

Professional Qualification: RN, ICU cert, BN, M.Hth Sc, Grad Dip Clin Epi

Organisation: Royal Perth Hospital Signature:

The names of those responsible for developing the clinical protocol must be clearly documented above. The list should include members of the multi-disciplinary teams associated with the designated area. Persons may include:

Potential nurse practitioners, relevant specialist medical or allied health persons, a consumer representative, a radiology representative, a pharmacy representative, a pathology representative, experts in protocol and research development, representatives from the quality dept.

## PROTOCOL 1

### MANAGEMENT OF HEPATITIS C

#### EXTERNAL PEER REVIEW PANEL

1. Name: Dr S Chris Papas                      Position: Director, Clinical Research

Professional Qualification: MD, FRCP (C)

Organisation: St Luke's Texas Liver Institute, Houston Texas, USA

Signature:

2. Name:    Position:

Professional Qualification:

Organisation:                                      Signature:

3. Name:    Position:

Professional Qualification:

Organisation:                                      Signature:

Each member of the external peer review panel must sign off on each clinical protocol. This panel may mirror the clinical protocol development panel and should include experts in the field, public policy analysts, allied health professionals and consumer representatives.

#### STATEMENT OF INTENT

The intent of the Hepatitis C Clinical Protocol is to increase the scope of practice of the registered nurse practitioner caring for patients formally diagnosed with Hepatitis C, thereby improving the access, effectiveness, efficiency and quality of health care provided to patients. This protocol aims to provide information on which decisions can be made in the management of Hepatitis C.

## **PROTOCOL 1**

### **MANAGEMENT OF HEPATITIS C**

#### **INTRODUCTION**

The management of Hepatitis C, Protocol 1, has been designed to assist the nurse practitioner, Liver Service, to effectively manage patients with Hepatitis C.

The prevalence of Hepatitis, in particular Hepatitis C, is increasing. In Australia it is estimated that 250,000 persons have Hepatitis C alone and there are 11,000 new cases of Hepatitis C diagnosed in Australia every year. Many persons with Hepatitis C live in rural and remote areas or have difficulty accessing treatment. Given the increasing incidence and the poor stigma attached to this disease, the need for an efficient and collaborative approach to treatment is essential.

The target population are members of the WA community suffering from chronic Hepatitis C. This includes clients in rural centres outside of the metropolitan area and a variety of specialty community groups. The intended target population will diversify with time, as the educational programs and prevention extend further into the community.

The increased scope of practice of the nurse practitioner, Liver Service, will improve the effectiveness and efficiency of the care offered to the Western Australian public and will allow greater autonomy to this nurse practitioner when outreaching into the high-risk areas in the community.

The Liver Service at Royal Perth Hospital has one of the largest Hepatitis C treatment programs in Australia. The Hepatitis C GP Shared Care Program has enabled the service to expand the treatment program. The Nurse Practitioner has a vital role to play in implementing the established protocols following the initial assessments performed by the Specialists in the Liver Clinic. The Multi-disciplinary Liver Group which has been endorsed by the Hospital Executives, has been formed to facilitate effective functioning of the Hepatitis Program.

#### **PURPOSE**

To guide and facilitate the Nurse Practitioner (NP) in diagnosing and providing appropriate care for the client.

#### **SCOPE**

This protocol relates to the advanced scope of practice of the nurse practitioner, Liver Service, for managing Hepatitis C. It will assist the NP in the recognition, diagnosis and management of patients chronically infected with the Hepatitis C virus (HCV).



Royal Perth Hospital

## EXPECTED OUTCOMES

The major outcomes considered for this protocol are as follows:

- Improved client outcomes:
  - Suppression of HCV virus replication
  - Stop/delay the progression of liver disease
  - Prevention of cirrhosis and its complications
  - Prevention of hepatocellular carcinoma
  - Prevention of transmission of Hepatitis C
- Reduced health costs through adverse events reductions
- Reduced variation (consistency) in clinical practice

## METHODOLOGY

1. The methods used to collect/ select/ review evidence are as follows:

- Hand searches of published literature (primary sources)
- Hand searches of published literature (secondary sources)
- Searches of Electronic Databases

2. The methods used to assess the quality and strength of the evidence are as follows:

- Weighting according to a Rating Scheme (the scheme is described briefly below):

The definitions of the 'Quality of Evidence' as per the rating scheme has been developed and modified by the Practice Guideline Committee of the American Association for the Study of Liver Diseases from the categories of the Infectious Diseases Society of America's Quality Standards.

The rating scheme relating to the Quality of Evidence is as follows:

**Grade 1:** Evidence from well designed randomised control trials with sufficient statistical power.

**Grade 2:** Evidence from at least one large clinical trial with or without randomisation from cohort or case controlled analytical studies.

**Grade 3:** Evidence based on clinical experience, descriptive studies, or reports of expert advisory panels.

## PROTOCOL VALIDATION

The method of protocol validation:

- Head of Liver Service, Royal Perth Hospital (RPH)
- Clinical Protocol Advisory Panel, Liver Service, RPH
- Independent External Hepatologist:



Royal Perth Hospital

The independent External Reviewer is a prominent Hepatologist who runs one of the largest Hepatitis Programs in United States and currently has 3 Nurse Practitioners working with him.

*Dr S Chris Papas MD, FRCP (C)*  
*Director, Clinical Research*  
*St Luke's Texas Liver Institute*  
*6720 Bertner Avenue*  
*Houston, TX 77030 USA*

- Comparison with protocols from other groups

## **ASSESSMENT**

The algorithm for the management of Hepatitis C is illustrated on **Appendix 111**.

### **Client /Patient History**

Take a complete history of the client:

- Symptoms
- Current medical, surgical & psychiatric history
- Past medical, surgical and psychiatric
- Allergy history, family history
- Alcohol and dietary history
- Psychosocial history
- Occupational history
- History of risk behaviour - IVDU, blood product transfusion prior to screening in 1990, incarceration (due to the high rate of risk behaviours such as IVDU), tattoos, body piercing (especially if multiple and no other identifiable risk factors)
- Ethnic background (more prevalent in Asian and European countries)
- Previous diagnostic investigations
- Current medications

### **Physical Examination**

Conduct a physical examination of the client:

- Signs of chronic liver disease - palmar erythema, Dupuytren's contractures liver nails, spider naevi, hepatomegaly, splenomegaly
- Signs of decompensated liver disease – jaundice, bruising, encephalopathy, abdominal ascites, oedema, cachexia
- General examination – weight, height, BMI (body mass index), blood pressure recording, temperature, pulse, respiration



Royal Perth Hospital

## Investigations

Determine and conduct the type of investigations necessary for diagnosis and management of the client:

- HCV RNA (qualitative and quantitative)
- HCV Genotype
- LFT, U&E, UA, TFT
- FBC, INR
- Fasting lipid profile, BSL
- ANA, ASMA, AMA
- Caeruloplasmin, Ferritin, alpha – 1 antitrypsin
- AFP
- BHCG (in fertile women)
- Abdominal ultrasound
- ECG

## DIAGNOSIS

Confirm diagnosis of the client:

- Positive anti HCV
- Positive HCV RNA
- Liver biopsy for exclusion of other causes of liver diseases and assessment of fibrosis (staging) and inflammation (grading) by METAVIR score

## MANAGEMENT

Determine the treatment options of the client based on:

- Eligibility for treatment based on METAVIR score on liver biopsy
- Anti-viral therapy under Section 100 criteria (refer to **Appendix 1**)
- Treatment schedule according to genotype & stage of fibrosis (algorithm for treatment of Hepatitis C is illustrated on **Appendix 11**)
- Identification of high risk clients with co-morbidities, in particular, cardiac disease, anaemia, renal disease and psychiatric disorders
- Exclusion of clients with child's Pugh B and C cirrhosis
- Assess eligibility for clinical trials in those who do not fulfil Section 100 criteria
- Assess eligibility for clinical trials in those who meet Section 100 criteria
- Non pharmacological approach including counselling and support

## MANAGEMENT PARTNERSHIPS

Refer to medical specialists and other health professionals, as required, to assist in the overall management of treatment:

- Function as member of the multi disciplinary group. Members of this collaborative practice is shown on **Appendix V1**
- Treatment outside of NP scope of practice, in particular, adverse events as a result of treatment with pegylated interferon and ribavirin:
  - ❑ Cardiac disease- ischaemic chest pain, arrhythmia, heart failure
  - ❑ Thyroid dysfunction – hyperthyroidism, hypothyroidism
  - ❑ Significant bone marrow suppression
  - ❑ Systemic infections
  - ❑ Psychiatric disorders
- Psychosocial referral to counsellor, community groups, Hepatitis Council and other support groups
- Referral to social worker for financial, accommodation and other social issues
- Referral to dietician for dietary advice and nutritional support in those with significant weight loss or in those who require weight reduction as part of their management regimen (ie decrease steatosis, improve response rate)

## ONGOING MANAGEMENT

Follow up and review clients:

- Discuss follow up plan with clients (refer to **Appendices 1V & V**)
- Tests results
- Monitor progress
- Treatment progress
- Dose reductions of pegylated interferon and ribavirin according to treatment protocol
- Side effects profile and management
- Reinforcement of health promotion/prevention messages
- Referral to medical specialists for routine 3 to 6 months review

And:

- Regular weekly discussions with Head of Liver Service on clients progress, management of adverse events, treatment programs and clinical trials

## SEPARATION

As this is a treatment and management of adverse effects program, the client is discharged from the NP service on completion of treatment.



Royal Perth Hospital

The criteria of discharge from NP service are:

- Completion of treatment program
- Briefing of completed treatment program, progress during treatment, current status, future health considerations and discharge
- Referral to GP for long term management
- Referral for specialist care for those with cirrhosis for hepatoma surveillance
- Issue of information booklets on Hepatitis C

**Appendices**

***App I: Section 100 Criteria***

***App II: Algorithm for Treatment of Hepatitis C with Pegylated Interferon and Ribavirin***

***App III: Algorithm for Management of Hepatitis C***

***App IV: Clinical/ Laboratory Evaluation Flowchart (48 weeks treatment)***

***App V: Clinical/ Laboratory Evaluation Flowchart (24 weeks treatment)***

***App VI: Members of the Multi Disciplinary Liver Group 2004***

## PROTOCOL 1

### MANAGEMENT OF HEPATITIS C

### FORMULARY OF DRUGS

#### DRUG GENERIC NAME: *TRAMADOL*

<b>Poisons Schedule:</b>	S4
<b>Therapeutic Class:</b>	Narcotic analgesic
<b>Dosage Range:</b>	50 - 100 mg, maximum daily dose of 400 mgs (300 mg max dose for those older than 75 years)
<b>Route:</b>	Oral
<b>Frequency of Administration:</b>	4 to 6 hours
<b>Duration of Order:</b>	1 month
<b>Actions:</b>	Binds to mu opioid receptors and also inhibits re-uptake of noradrenaline and serotonin.
<b>Indications For Use:</b>	Relief of moderate to severe pain
<b>Contraindications to Use:</b>	Previous serious allergic reactions to tramadol
<b>Side Effects:</b>	Headache, CNS stimulation, asthenia, sweating, coordination disturbance, sleep disorder, dyspepsia, rash, itch

**Endorsed By:**

**Date:**

**Effective Date:**

**Review Date:**

**Note:**

Any alteration or amendment must be submitted to the Director General of Health, Department of Health, Western Australia for approval otherwise the document is invalid.

**DRUG GENERIC NAME: *PARACETAMOL WITH CODEINE***

<b>Poisons Schedule:</b>	S4
<b>Therapeutic Class:</b>	Combination analgesic (Paracetamol with 15 mg or 30 mg of codeine phosphate)
<b>Dosage Range:</b>	500/15 - 30 mg to 1000/30 - 60 mg. Max daily dose 4000 mg
<b>Route:</b>	Oral
<b>Frequency of Administration:</b>	4 to 6 hours
<b>Duration of Order:</b>	1month
<b>Actions:</b>	Paracetamol inhibits prostaglandin synthesis; Codeine activates opioid receptors in the central and peripheral nervous system to produce analgesia. It also acts presynaptically to reduce the release of neuro transmitter substances and also reduce the activity of postsynaptic neurons in the spinal cord preventing the transmission of the pain impulse.
<b>Indications For Use:</b>	Relief of mild to moderate pain
<b>Contraindications to Use:</b>	Liver or kidney disease; Depression; Alcoholism; Respiratory depression
<b>Side Effects:</b>	Heartburn, nausea, vomiting, constipation, dizziness, drowsiness skin rash;

***Endorsed By:***

***Date:***

***Effective Date:***

***Review Date:***

***Note:***

*Any alteration or amendment must be submitted to the Director General of Health, Department of Health, Western Australia for approval otherwise the document is invalid.*

**DRUG GENERIC NAME: *RIBAVIRIN***

<b>Poisons Schedule:</b>	S4
<b>Therapeutic Class:</b>	Nucleoside analogue antiviral
<b>Dosage Range:</b>	< 75 kg body weight, 400 mg morning, 600 mg evening, >75 kg body weight, 600 mg morning and evening
<b>Route:</b>	Oral
<b>Frequency of Administration:</b>	12 hourly
<b>Duration of Order:</b>	3 months
<b>Actions:</b>	Nucleoside analogue that interferes with RNA and DNA synthesis, thereby inhibiting protein synthesis and viral replication.
<b>Indications For Use:</b>	Hepatitis C
<b>Contraindications to Use:</b>	Pregnant women and men whose partner is pregnant or is not using adequate contraception; Previous serious allergic reaction to ribavirin; Severe cardiac disease including unstable or uncontrolled cardiac disease in the previous 6 months; Haemoglobinopathy; Autoimmune disease; Immunosuppressed patients; Uncontrolled thyroid disease; Current or previous severe psychiatric condition; Epilepsy
<b>Side Effects:</b>	Rash/ pruritis, upper respiratory tract congestion, haemolytic anemia (dose dependent) teratogenicity.

***Endorsed By:***

***Date:***

***Effective Date:***

***Review Date:***

***Note:***

*Any alteration or amendment must be submitted to the Director General of Health, Department of Health, Western Australia for approval otherwise the document is invalid.*

**DRUG GENERIC NAME: PEGINTERFERON -  $\alpha$ - 2a**

<b>Poisons Schedule:</b>	S4
<b>Therapeutic Class:</b>	Immunostimulant
<b>Dosage Range:</b>	180 mcg weekly
<b>Route:</b>	Subcutaneous injection
<b>Frequency of Administration:</b>	Weekly dose
<b>Duration of Order:</b>	3 months
<b>Actions:</b>	Binds infected cell membranes inducing cellular enzymes which inhibit virus replication; suppresses cell proliferation and enhances phagocytosis by macrophages. Augments some cytotoxic chemicals.
<b>Indications For Use:</b>	Hepatitis C
<b>Contraindications to Use:</b>	Severe depression, psychosis, uncontrolled diabetes, cardiac failure, autoimmune disease, organ transplantation (other than liver), pregnancy
<b>Side Effect:</b>	Malaise, fatigue, low grade fever, diarrhoea, weight loss, hair loss, neutropenia, thrombocytopenia. Thyroid dysfunction, worsening of psoriasis, depression, irritability/ loss of concentration,. Interstitial lung disease, cardiomyopathy, retinopathy

**Endorsed By:**

**Date:**

**Effective Date:**

**Review Date:**

**Note**

Any alteration or amendment must be submitted to the Director General of Health, Department of Health, Western Australia for approval otherwise the document is invalid.

**DRUG GENERIC NAME: PEGINTERFERON -  $\alpha$ -2b**

<b>Poisons Schedule:</b>	S4
<b>Therapeutic Class:</b>	Immunostimulant
<b>Dosage Range:</b>	1.5 mcg/ kg
<b>Route:</b>	Subcutaneous injection
<b>Frequency of Administration:</b>	Weekly dose
<b>Duration of Order:</b>	3 months
<b>Actions:</b>	Binds infected cell membranes inducing cellular enzymes which inhibit virus replication; suppresses cell proliferation and enhances phagocytosis by macrophages. Augments some cytotoxic chemicals.
<b>Indications For Use:</b>	Hepatitis C
<b>Contraindications to Use:</b>	Severe depression, psychosis, uncontrolled diabetes, cardiac failure, autoimmune disease, organ transplantation (other than liver), pregnancy
<b>Side Effects:</b>	Malaise, fatigue, low grade fever, diarrhoea, weight loss, hair loss, neutropenia, thrombocytopenia. Thyroid dysfunction, worsening of psoriasis, depression, irritability/loss of concentration. ; Interstitial lung disease, cardiomyopathy, retinopathy

**Endorsed By:**

**Date:**

**Effective Date:**

**Review Date:**

**Note:**

*Any alteration or amendment must be submitted to the Director General of Health, Department of Health, Western Australia for approval otherwise the document is invalid.*

**DRUG GENERIC NAME: *METOCLOPRAMIDE***

<b>Poisons Schedule:</b>	S4
<b>Therapeutic Class:</b>	Dopamine antagonist, prokinetic agent
<b>Dosage Range:</b>	10 mg
<b>Route:</b>	Oral
<b>Frequency of Administration:</b>	6 to 8 hours as needed
<b>Duration of Order:</b>	3 months
<b>Actions:</b>	Stimulates gastrointestinal motility, increases gastric emptying and increases LOS pressure
<b>Indications For Use:</b>	Nausea and vomiting
<b>Contraindications to Use:</b>	Phaeochromocytoma, previous adverse reaction to dopamine antagonists
<b>Side Effects:</b>	Abdominal cramps, restlessness, drowsiness, dizziness, headache, diarrhoea, extrapyramidal adverse effects

***Endorsed By:***

***Date:***

***Effective Date:***

***Review Date:***

***Note:***

*Any alteration or amendment must be submitted to the Director General of Health, Department of Health, Western Australia for approval otherwise the document is invalid.*

**DRUG GENERIC NAME: *BETAMETHASONE (DIPROSONE)***

<b>Poisons Schedule:</b>	S4
<b>Therapeutic Class:</b>	Topical corticosteroid
<b>Dosage Range:</b>	Apply sparingly
<b>Route:</b>	Topical
<b>Frequency of Administration:</b>	1- 2 times a day
<b>Duration of Order:</b>	2 weeks
<b>Actions:</b>	Anti- inflammatory, immunosuppressive and antimitotic against cutaneous fibroblasts and epidermal cells
<b>Indications For Use:</b>	Inflammatory skin conditions
<b>Contraindications to Use:</b>	Rosacea, Acne vulgaris, allergy to corticosteroids, ulcerative conditions and / or impaired circulation, uncontrolled infection in area to be treated
<b>Side Effects:</b>	Folliculitis, steroid rosacea, perioral dermatitis, skin atrophy, delayed wound healing, striae, purpura, depigmentation

***Endorsed By:***

***Date:***

***Effective Date:***

***Review Date:***

***Note:***

*Any alteration or amendment must be submitted to the Director General of Health, Department of Health, Western Australia for approval otherwise the document is invalid.*

**DRUG GENERIC NAME: *TEMAZEPAM***

<b>Poisons Schedule:</b>	S4
<b>Therapeutic Class:</b>	Benzodiazepine
<b>Dosage Range:</b>	5 to 20 mg (adult) at night; 5 to 10 mg (elderly) at night
<b>Route:</b>	Oral
<b>Frequency of Administration:</b>	Up to 20 mg nightly (refer dosage range above)
<b>Duration of Order:</b>	1 month
<b>Actions:</b>	Potentiates the inhibitory effects of GABA throughout the CNS resulting in anxiolytic, sedative, hypnotic, muscle relaxant and antiepileptic effects
<b>Indications For Use:</b>	Insomnia
<b>Contraindications to Use:</b>	Respiratory depression, severe hepatic impairment, myasthenia gravis
<b>Side Effects:</b>	Drowsiness, oversedation, light headedness, memory loss, slurred speech, ataxia

***Endorsed By:***

***Date:***

***Effective Date:***

***Review Date:***

***Note:***

*Any alteration or amendment must be submitted to the Director General of Health, Department of Health, Western Australia for approval otherwise the document is invalid.*



Royal Perth Hospital

## **PROTOCOL 1**

### **MANAGEMENT OF HEPATITIS C**

#### **AGREEMENT**

Royal Perth Hospital agrees to share the clinical protocols developed for the Liver Service, within the health care industry. A copy of the protocols may be held at the Office of the Chief Nursing Officer and may be made available online on the Department of Health's websites.

## **PROTOCOL 1**

### **MANAGEMENT OF HEPATITIS C**

#### **IMPLEMENTATION PLAN – CLINICAL PROTOCOLS**

##### **1. Approval Process**

The clinical protocol is to be:

- approved by the Clinical Protocol Advisory Panel, Liver Service, RPH
- submitted to the Director General of Health for approval in accordance with legislative requirements.

##### **2. Designated Area**

The Liver Service, RPH

- to be designated as an area of practice for a Nurse Practitioner (NP) by the Director General of Health upon the advice of the Chief Nursing Officer.

##### **3. Position of NP and Orientation**

Upon designation of the Liver Service:

- the NP position will be advertised and filled (through an equitable and fair process).
- The NP will be orientated to the service by familiarisation of the clinical protocols.

##### **4. Implementation Date**

The effective implementation date:

- will be ascertained by RPH upon advice from the Head of the Liver Service.

#### **PROPOSED EVALUATION OF THE CLINICAL PROTOCOL**

The principles of ensuring accountability and safeguarding optimal health care is based on continually improving service quality and clinical excellence, and can be achieved through the clinical governance framework.

In WA, the model for clinical governance is based on 4 pillars – clinical performance and evaluation, professional development and management, clinical risk and consumer value.

The evaluation requirements will be a systematic evaluation process that is part of the daily operation. The plan is transparent across both RPH and the Liver Service meeting the varied internal and external organisational requirements. At the completion of 12 months service, a report will be forwarded to the Director General on the evaluation of the protocol in practice.



Royal Perth Hospital

## **Evaluation Process**

### ***Clinical Performance and Evaluation***

The Liver Service is required to develop, use, monitor and evaluate evidence-based clinical standards.

The process is for:

- standards to be reviewed/audited and evaluated every 12 months or as required, by the Nurse Practitioner, the multi-disciplinary liver team and the Clinical Protocol Advisory Panel.
- improvement in client outcome to be monitored through compliance with treatment program and reduction in adverse events.

### ***Professional Development and Management***

The Liver Service is required to support and document clinical growth and maintain professional standards. Nurse practitioners will need to have the skills and competencies necessary for their particular designated area.

The process is for:

- skills and competency standards to be maintained in this area by RPH through a continuing professional education program for nurse practitioners.
- the monitoring and reporting on staff satisfaction

### ***Clinical Risk***

This focuses on the minimisation of risk and improvement in clinical safety. The Liver Service needs to identify potential risks eg clinical incidents, clients' adverse events to treatment and develop policies/standards.

The process is to:

- monitor, record and report clinical incidents and adverse events
- implement changes through recording and updating of standards

### ***Consumer Value***

The Liver Service encourages client participation and provides them with information. This supports informed decision-making and effective health care delivery.

The process is to:

- conduct client satisfaction surveys
- record client complaints
- record consumer participation via database

## REFERENCES

- ACT Health Department. 2002, *The ACT Nurse Practitioner Project, Final Report of The Steering Committee*, ACT Printing, Canberra.
- Alberti, A., Benvegna, L. (2003). Management of hepatitis C. *Journal of Hepatology*, 38, 104-118.
- Almost, J., Spence- Laschinger, HK (2002). Workplace empowerment, collaborative work relationships and job strain in nurse practitioners. *Journal of American Academy of Nurse Practices*, 14 (9), 408-420.
- Amundsen, SB., Corey, EH. (2000). Decisions behind career choice for Nurse Practitioners: Independent versus collaborative practice and motivational-needs behavior. *Clinical Excellence for Nurse Practitioners*, 4 (6), 309-315.
- Appel AL, Malcolm P (1999). The struggle for recognition: the nurse practitioner in NSW, Australia. *Clinical Nurse Specialist*, 13, (5), 236-241
- Blair, KA. (2002). Collaborative interdisciplinary team practice: A dream or reality?
- Chiarella M. (1998). Independent autonomous or equal: What do we really want? *Clinical Excellence for Nurse Practitioners*, 2 (5), 293-299.
- Cleveland Clinic. 2004, *The Team Approach to HCV Management*, Seattle, USA.
- Department of Health Western Australia, Office of the Chief Nursing Officer, 2003. *Guiding Framework for the Implementation of Nurse Practitioners in Western Australia*, Department of Health Western Australia, Perth.
- Department of Health Western Australia, Office of the Chief Nursing Officer, 2003. *Western Australian Nurse Practitioner Business Case and Clinical Protocols Template*, Department of Health Western Australia, Perth.
- Fried, MW. (2002). Side effects of therapy of hepatitis C and their management. *Hepatology*, 36 (5), 237-244.
- Gane, E. (2002). Treatment of recurrent hepatitis C. *Liver transplantation*, 8 (10), 28-37.
- George, M. & Davey, P. 1999, *The Responsibility of Health Boards for Clinical Governance*, Legal Report, ACHSE.
- Gils, B. 2001, *Nurse Practitioner Project*, Victoria, Policy and Strategic Projects Division, Victoria.
- Joint Commission on Accreditation of Healthcare Organisations. 1989, *Principles of Organisation and Management Effectiveness*, The Commission, Washington.



Royal Perth Hospital

Kidd, H. & Tibbett, P. 2002, *Nursing Services Performance Indicator Framework*, Royal Perth Hospital, Perth.

Kidd, H. & Tibbett, P. 2003, *Framework for the development of nursing practice standards at Royal Perth Hospital*, Royal Perth Hospital, Perth.

Wright, TL. (2002). Treatment of patients with hepatitis C and cirrhosis. *Hepatology*, 36, 185-194.

Lindeke L, Chesney M, Tanner M. Reimbursement realities for advanced practice nurses. *Nursing Outlook* 1999; 47:248-251. Abstract.

National Nursing Organisations October (2000). National Consensus Statement on Recognition of Nurse Practitioners in Australia. Melbourne, Victoria.

Neale J. Nurse practitioners and physicians: a collaborative practice. *Clinical Nurse Specialist*. 13(5): 252-8, 1999 Sep.(43).

Sherwood GD, Brown M, Fay V., Wardell D. (1997). Defining Nurse Practitioner Scope of Practice: Expanding Primary Care Services. *The Internet Journal of Advanced Nursing Practice*, 1 (2), 1-12.

Smithson J. Professional Issues. Nurse practitioners: the need for recognition. *BR J Community Nursing* 4(2): 65-9, 1999 Feb. (46 ref).

Schiff, E. 2004, *Web MD: Your 2000 Page Hepatitis Encyclopaedia*, University of Miami, USA.

Nrale J. (1999). Nurse practitioners and physicians: a collaborative practice. *Clinical Nurse Specialist*, 13(5), 252-8.

NSW Department of Health, 1995. *Nurse Practitioner Project (stage 3)*. Final Report of the Steering Committee, Sydney. NSW Department of Health. 1998, *Nurse Practitioner Project Stage 3*, [www.health.nsw.gov.au/nursing/npract.html](http://www.health.nsw.gov.au/nursing/npract.html)

Nrale J. (1999). Nurse practitioners and physicians: a collaborative practice. *Clinical Nurse Specialist*, 13(5), 252-8.

Nurses Board of South Australia. 2002, *Authorisation of Nurse Practitioners*, [www.nursesboard.sa.gov.au](http://www.nursesboard.sa.gov.au)

Nurses Board of Western Australia. 2003, *Professional Standards for Nurse Practitioner Practice*, Nurses Board of Western Australia, Perth.

Nurses Board of Western Australia. 2000, *Nurses Code of Practice 2000*, Nurses Board of Western Australia, Perth.



Royal Perth Hospital

Nrale J. (1999). Nurse practitioners and physicians: a collaborative practice. *Clinical Nurse Specialist*, 13(5), 252-8.

Schiff, E. 2004, *Web MD: Your 2000 Page Hepatitis Encyclopaedia*, University of Miami, USA.

Sherwood GD, Brown M, Fay V., Wardell D. (1997). Defining Nurse Practitioner Scope of Practice: Expanding Primary Care Services. *The Internet Journal of Advanced Nursing Practice*, 1 (2), 1-12.

Smithson J. Professional Issues. Nurse practitioners: the need for recognition. *BR J Community Nursing* 4(2): 65-9, 1999 Feb. (46 ref).

Sherwood, GD., Brown, M., Fay, V., Wardell, D. (1997). Defining nurse practitioner scope of practice: Expanding primary care services. *The Internet Journal of Advanced Nursing Practice*, 1 (2), 1-12.

Pascoe, G. 1983, Patient satisfaction in primary health care: A literature review and analysis, *Evaluation and Program Planning*, vol.6, pp. 185-210.

Queensland Nurses Council, 1998. *The Scope of Nursing Practice Framework*, Queensland Nurses Council, Brisbane.

Royal Perth Hospital. 2002, *Risk Management, Occupational Safety and Health Policy and Procedures Manual*, Risk Management Department, Perth.

Royal Perth Hospital. 2002, *Royal Perth Hospital Strategic Plan 2002-2007*, Royal Perth Hospital, Perth.

Western Australian Council for Safety & Quality. 2003, *Western Australian Clinical Governance Guidelines*, Office of Safety & Quality in Health Care, Perth.

Western Australian Government. 2003, *Nurses Amendment Act 2003*, State Law Publisher, Perth.

Zwarenstein, M., Bryant, W. (2003). Interventions to promote collaboration between nurses and doctors (Cochrane Review). In: *The Cochrane Library*, Retrieved October 16 2003 from Update Software.

## **Section 100 criteria for treatment of patients with Hepatitis C (general)**

### **Patients who:**

Have **chronic hepatitis and fibrosis** evident on liver biopsy, except in patients with inherited coagulation disorders

Have a repeatedly positive anti-HCV antibody test

Have abnormal ALT levels in conjunction with demonstration of viral infection (HCV RNA positive and/or anti-HCV positive)

Do not have other liver diseases

Are not pregnant, not lactating and are practising an adequate form of birth control

Have no history of significant psychiatric illness

Would be likely to attend regularly for treatment and follow-up

Take no more than 7 standard alcoholic drinks per week

## **Section-100 Guidelines for Combination therapy of Pegylated interferon and Ribavirin**

### **Interferon-naïve patients only**

Treatment of chronic hepatitis C in patients previously untreated with interferon- $\alpha$  2a/2b and who satisfy all of the following criteria:

1. Histological evidence of fibrosis of Metavir (or equivalent index) of stage 2, 3, or 4 fibrosis or stage 1 with grade A2 or A3 inflammation, i.e. moderate to severe inflammation evidence on liver biopsy (except in patients with coagulation disorders severe enough to preclude liver biopsy)
2. Abnormal serum ALT levels in conjunction with documented chronic hepatitis C infection (repeated anti-HCV positive and /or HCV RNA positive)
3. Female patients of child-bearing age are not pregnant, not breast-feeding, and both patients and their partner are using effective forms of contraception (one for each partner). Female partners of male patients are not pregnant.

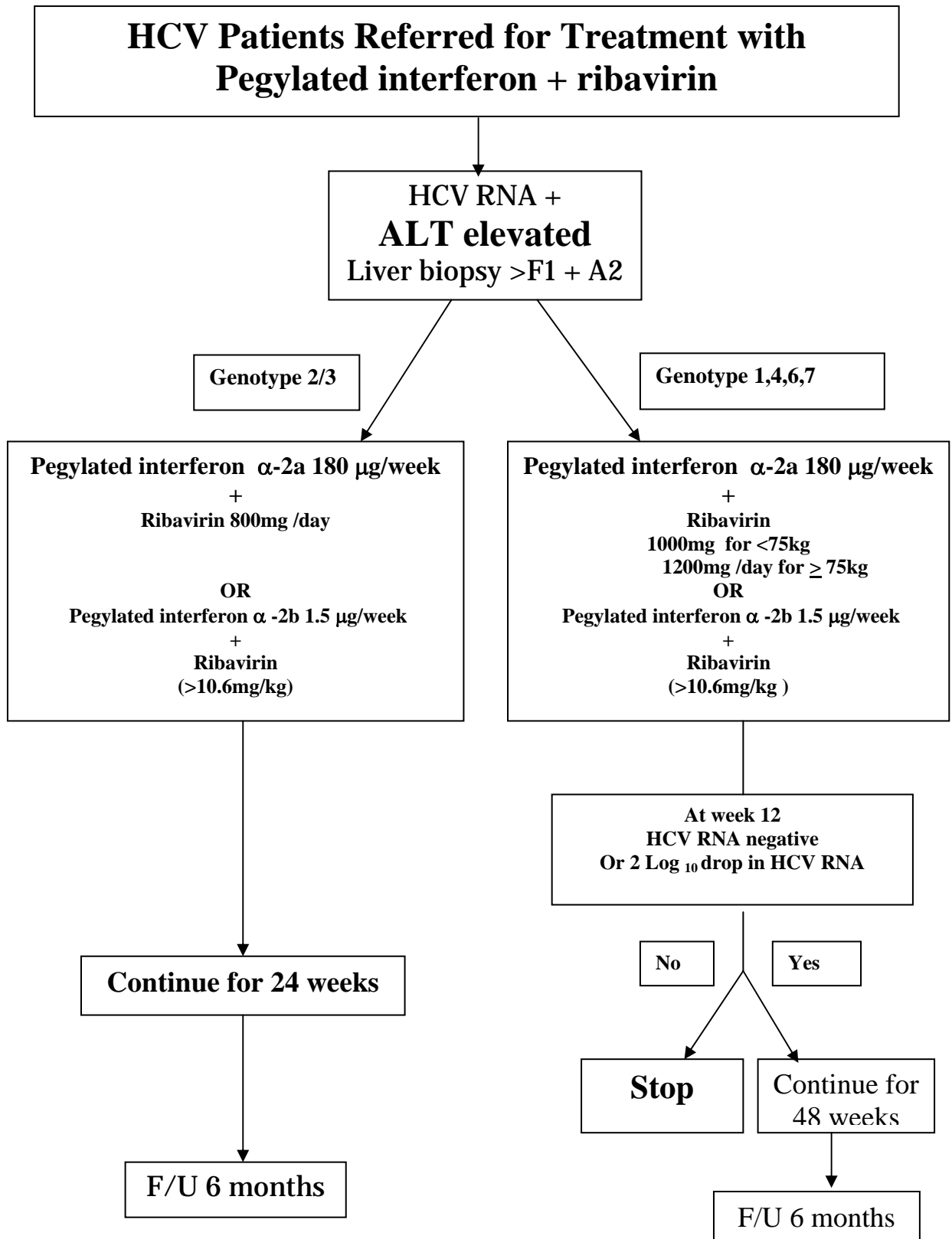
The treatment course is limited to **24 weeks**

Except in patients with **genotype 1,4,6,7 hepatitis C and patients with hepatic cirrhosis or bridging fibrosis** regardless of genotype, for whom treatment is limited to **48 weeks**.

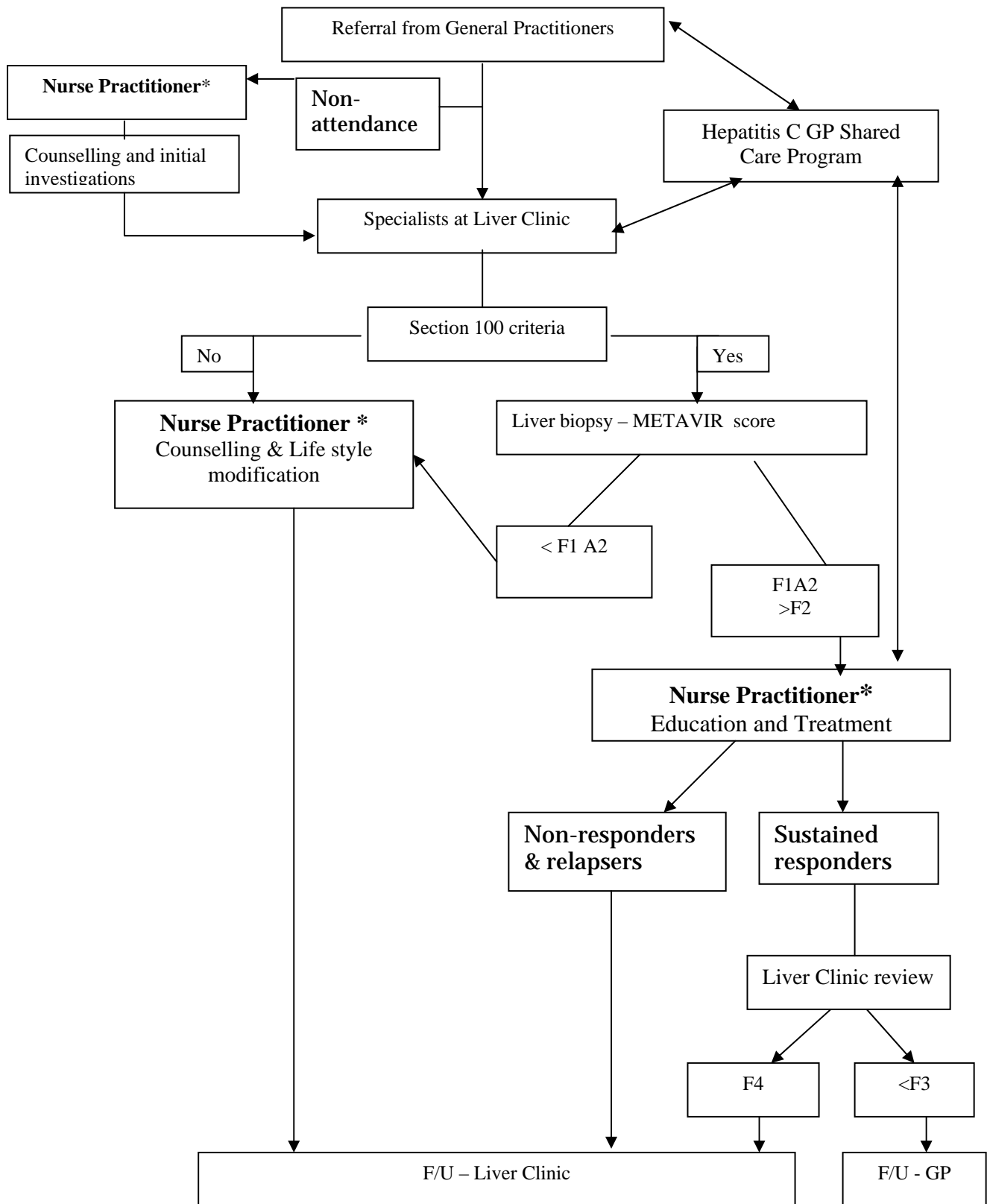
Patients eligible for 48 weeks treatment may only continue therapy if plasma HCV RNA is **not detectable** or there has been a **2 Log<sub>10</sub> drop in quantitative assay at week 12 of therapy.**

## Appendix II

### Algorithm for Treatment of Hepatitis C with Pegylated Interferon + Ribavirin



Algorithm for Management of Hepatitis C



F/U = follow-up; GP = General Practitioners; F = fibrosis; A = Inflammatory Activity