

Funded antiretrovirals

Information taken from [www.pharmac.govt.nz/wwrts/HMLOnline](http://www.pharmac.govt.nz/wwrts/HMLOnline) on 15 Oct 19

<b>Drug</b>	<b>Monthly cost (at normal adult dose)</b>
Efavirenz with emtricitabine and tenofovir	\$107
Emtricitabine with tenofovir	\$61
Emtricitabine	\$307
Efavirenz	\$63
Nevirapine	\$60
Abacavir with lamivudine	\$63
Zidovudine with lamivudine	\$33
Atazanavir (plus ritonavir)	\$185
Lopinavir with ritonavir	\$463
Darunavir (plus ritonavir)	\$378
Dolutegravir†	\$1090
Raltegravir†	\$1090

<b>Commonly used starting regimens</b>	<b>Yearly cost</b>
Efavirenz with emtricitabine and tenofovir	\$1,284
Emtricitabine with tenofovir and dolutegravir†	\$13,812
Emtricitabine with tenofovir and darunavir/r	\$5,268

†Subject to a confidential pricing rebate (i.e. PHARMAC nationally agreed contract price is cheaper but secret)

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## **PURPOSE OF THIS DOCUMENT**

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This document offers information and guidance about blood disorders and how to interpret blood test results when assessing a visa applicant's standard of health.

## **BACKGROUND**

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Applicants for residence or temporary entry visas provide medical certificates which include the results from blood tests.

For a General Medical Certificate (GMC), the results show:

- Full Blood Count (FBC)
- Creatinine (Cr)
- HBA1c
- HIV
- hepatitis B (HBsAg)
- hepatitis C (Anti-HCV or HCV Ab), and
- syphilis.

For a Limited Medical Certificate (LMC) the results are only for a FBC and Cr.

## **ASSESSING BLOOD TEST RESULTS FOR ASH REQUIREMENTS**

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### **Note**

If you are unsure whether blood tests results are likely to be of concern or may need further investigation, contact the MOs for advice.

### **Haemoglobin**

In general, elevated haemoglobin is not considered significant, for any visa type unless the applicant has a confirmed medical diagnosis for a significant medical condition related to elevated haemoglobin – for example, sickle cell disease.

Decreased haemoglobin can be a sign of anaemia which is common amongst visa applicants, especially women and girls from developing countries who are vegetarian.

Hb  $\geq$ 100 and microcytosis

If the applicant has Hb  $\geq$ 100 and microcytosis, this is most likely anaemia caused by an iron deficiency which is common in vegetarians and pregnant women. If you have no other concerns about the applicant's health, they are likely to meet ASH requirements.

If you do have a concern – for example, the applicant is male and not vegetarian, they have Beta Thalassaemia Major or another blood disorder – consider making a FIR for a haematologist's assessment, including the ferritin level to confirm this.

Hb  $\geq$ 100 and normocytic

If the applicant has Hb  $\geq$ 100 and normocytic this may indicate age-related anaemia or anaemia caused by chronic disease. If no obvious cause has been identified and you have a concern about the result, then consider investigating further.

Hb  $\geq$ 100 and macrocytic

Possible causes for macrocytosis include B12 or folate deficiency, and ETOH use. Consider making a FIR to a haematologist for ferritin, B12 and folate tests. Always check the platelet level, as some visa applicants are so deficient in B12 that their platelets have been affected.

Hb  $\geq$ 80 and  $\leq$  100

If there is a reasonable explanation for the haemoglobin level and you have no other concerns, then the applicant is likely to meet ASH requirements. Otherwise, consider making a FIR for a haematologist's assessment to exclude thalassaemia or haemaglobinopathies, gastrointestinal and gynaecologic anaemia. Ask them to comment on the applicant's:

- medical history
- examination and diagnosis
- their management needs, and
- the long term prognosis.

### **White cell count (WCC)**

If the applicant's total white cell count is significantly abnormal, then investigate further:

- If the appearances are of a viral infection, then this would not be considered significant.
- In pregnancy the WCC normal range increases due to an increase in neutrophils.
- If a repeat FBC has been provided and the WCC is improving, this is unlikely to be considered significant.
- If the WCC is moderately abnormal, then consider asking for a repeat FBC to review this abnormality.
- If the WCC is under 3 or over 18, or you have any concerns that may suggest an underlying haematologic disorder, then make a FIR for a haematologist's assessment.

Allergies and parasitic infections are common amongst visa applicants, so mild to moderate eosinophilia is not a significant concern.

### **Platelets**

Some applicants' platelet levels are very low – between 10 and 20. This is often caused by a B12 deficiency which is common in vegetarians.

If an applicant has platelets  $<$ 100, this may be caused by:

- a B12 or folate deficiency
- liver disease or cirrhosis – especially if they have Hepatitis B or C
- ETOH use, or



- a malignancy.

If the platelet level is between 80 and 100, consider making a FIR for:

- a repeat FBC, and
- tests for ferritin, folate, B12 and liver function.

If the platelet level is <80 and there is no obvious cause, consider making a FIR for a haematologist's assessment.

### **Haemophilia**

If an applicant is confirmed to have haemophilia refer to the separate guidance available for this medical condition.

### **Beta Thalassaemia**

Beta Thalassaemia is an inherited blood disorder affecting the production of haemoglobin and causing anaemia. The anaemia can range from minor, which is managed with oral medication, to major, where the person needs lifelong monthly blood transfusions.

The cost of treating Beta Thalassaemia Major can be in the millions and patients who are well managed can live well into old age. Children with the disorder can risk brain damage if they do not receive transfusions and so may have bone marrow transplants instead, although there are risks associated with this.

#### Beta Thalassaemia Major

Applicants for residence or temporary entry with Beta Thalassaemia Major do not meet ASH requirements. For residence visa applicants, Beta Thalassaemia Major is on the list of conditions in A4.10.1 of Immigration Instructions.

#### Beta Thalassaemia Minor

In general Beta Thalassaemia Minor is not always considered to be significant. Your opinion may depend on whether the applicant has a significant anaemia which results in regular blood transfusions.

## **WORDING FURTHER INFORMATION REQUESTS (FIRS) TO APPLICANTS FOR BLOOD TESTS**

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Each of the following blood tests can be the subject of a FIR either as a stand alone request or as the FIR heading for a group of blood tests related to a particular medical condition:

- Liver Function Test (LFT)
- Repeat urinalysis
- Serum Creatinine (eGFR)
- HIV test

- Full blood count
- HBA1c
- Hepatitis B test
- Hepatitis C test.

If you have multiple requests for tests and medication lists, separate the test headings into the different medical conditions and use the appropriate headings for each condition.

#### **Examples**

If you request HBA1c, creatinine, eGFR, microalbumin:creatinine ratio, cholesterol profile, blood pressure, a medication list, FBC and a ferritin level, use the headings as follows.

**HBA1c** – an HBA1c, creatinine, eGFR, microalbumin : creatinine ratio, cholesterol profile, Blood Pressure and a medication list are required.

**Full Blood Count** – A Full Blood Count and a ferritin level are required.

If you request HBeAg, HBV DNA, LFTs, AFP, liver ultrasound and a liver Fibroscan (dated within the past 3 years), use the heading as follows.

**Hepatitis B test** – An HBeAg, HBV DNA, LFTs, AFP, Liver ultrasound and a Liver Fibroscan (dated within the past 3 years) are required please.

## **ASH OUTCOMES FOR APPLICANTS WITH ABNORMAL BLOOD TESTS**

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### **Haemoglobin levels**

If an applicant for residence or temporary visa has no other health concerns and:

Hb  $\geq$ 100 and microcytosis, then your opinion can be likely ASH.

Hb  $\geq$ 100 and macrocytic, then your opinion can be likely ASH for residence visas and likely ASH or AWC for a temporary visa

Hb over 80 and under 100, and a reasonable explanation for the haemoglobin level then your opinion can be likely ASH.

### **Beta Thalassemia Major**

Nearly all applicants with Beta Thalassemia Major are NOT ASH.

In your opinion for a residence visa applicant, note the condition from A4.10.1:

Severe or disabling hereditary disorders, including but not exclusive to: hereditary anaemias and coagulation disorders.

In your opinion for a temporary visa applicant, note:

Likely to impose significant costs and demands.



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The exception is an applicant with a Limited Medical Certificate. Your opinion for these applicants is that they are likely to meet ASH requirements.

## **REFERENCES**

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[Complete Blood Count in Primary Care - bpacNZ](#)

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## **BACKGROUND**

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The following document contains basic information on how to manage a variety of common and/or significant cardiovascular conditions. As with many medical conditions the presentation, clinical course and management of cardiovascular conditions can vary greatly and the recommendations in this document should be adapted as needed, to suit each individual case. However, NOT ASH outcomes relating to cardiovascular conditions can be particularly difficult to document correctly and where a specific NOT ASH reason has been provided, it is strongly recommended that you use these as this will aid in preventing confusion among applicants and LIAs, as well as prevention of complaints and IPT involvement in Residence applications.

*If you are unsure of the correct outcome for any cardiovascular condition, please contact the Medical Officers for their advice.*

**Note: Terminology of Cardiovascular conditions**

It is useful to remember that different countries use different terminology for various conditions and tests. In particular, an Exercise Tolerance Test (ETT) may be called a Treadmill Test (TMT) in some countries. For this reason, it is important to avoid using abbreviations that may be misunderstood when requesting FIR. For example, Exercise ECG is a suitable alternative for ETT that is easily understood internationally.

Also be aware of the use of Coronary Artery Disease and Ischaemic Heart Disease, as these are not the same thing.

- Coronary Artery Disease (CAD) can be used when the applicant has proven occlusions of the Coronary Arteries on imaging (e.g.angiogram), but does not have any symptoms or clinical disease.
- Ischaemic Heart Disease can be used when the applicant has symptoms or clinical evidence of heart disease +/- abnormalities on imaging.

**Appendix One contains background information about CVD Risk assessments.**

**Appendix Two contains a link to background information about Atrial Fibrillation and management of this condition.**

## ABNORMAL ECG

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Depending on the abnormality, a formal Cardiologist assessment should be considered. The information requested should always relate to the specific abnormality. If the abnormality is suggestive of Coronary Artery Disease then a formal Cardiologist assessment should be requested.

*For example:*

ECG shows ST changes in the inferior leads:

- A Cardiologist assessment should be requested which includes an ECHO and Exercise ECG to assess for ischaemic heart disease.

ECG shows AF:

- A Cardiologist assessment should be requested which includes an ECHO and a request for a CHA<sub>2</sub>DS<sub>2</sub>-VASc score and information regarding the applicant's risk of stroke.

## HYPERTENSION

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All applicants with Hypertension should have their CVD Risk calculated (see the following section on how to do this). A formal Cardiologist assessment should be requested for all applicants with:

- Uncontrolled Hypertension (BP >160/90)
- CVD Risk >20%
- CVD Risk >15% and any CVD high risk markers

This should always include a request for ECG, ECHO and Exercise ECG. It is worth noting that some countries in the Pacific do not have cardiologist or ECHOs available.

### **FIR/ AWC outcomes:**

The following information is useful to include when requesting FIR or providing AWC outcomes relating to hypertension:

- Creatinine, eGFR, protein : creatinine ratio, cholesterol profile, blood pressure, smoking history and a medication list.
- Consider also adding HBA1c if the applicant is high risk for Diabetes.

If any of this information has already been provided, **do not** include it in a new FIR request unless it has the potential to alter the case outcome.

## CVD RISK CALCULATORS

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If an applicant has a known history of Hypertension, Hyperlipidaemia or Diabetes then their CVD Risk should be calculated. New NZ specific CVD Risk assessment guidelines were released in 2018, but at present this is not relevant to Immigration medical assessments as no new risk calculators have been developed or released yet.

**If the applicant has a history of Diabetes:**

- The NZSSD online calculator should be used: <https://www.nzssd.org.nz/cvd/>

**If the applicant has *NO* history of Diabetes:**

- The QRisk online calculator should be used: <https://qrisk.org/2017/>

**It is not necessary to request any additional information before calculating the applicant's CVD Risk.**

The applicant's age, ethnicity, height, weight and blood pressure will be recorded in the examination findings. The MA should then assume the lowest possible risk for any information that they do not have. i.e. assume that the applicant:

- has never smoked;
- total cholesterol = 4, HDL = 1.2;
- ACR is normal.

**If the applicant has a CVD Risk  $\geq 20\%$ , or has any ECG changes consistent with CAD:**

- A Cardiologist assessment is required and should include a request for an ECG, ECHO, Exercise ECG.

**If the applicant has a CVD Risk between 15 - 20%:**

- Consider requesting a Cardiologist assessment if the applicant has any high risk markers\*

**\*High risk markers indicating significant increased cardiovascular risk include:\*\***

- Uncontrolled hypertension;
- Uncontrolled hyperlipidaemia;
- LV impairment of any sort;
- Regional Wall Abnormalities (RWMA's);
- Peripheral vascular disease;
- Cerebrovascular disease;
- DM II with complications;
- Multiple or recurrent previous cardiac events;
- Implantable Cardioverter Defibrillators (ICD);
- Atrial fibrillation (AF);
- High calcium score on CT.

\*\* as per Dr Ralph Stewart, Cardiologist

**Note:**

When assessing CVD Risk for a Fijian Indian please use "Indian" ethnicity not "Pacific".

## CARDIOMEGALY

Any applicant with cardiomegaly (CTR  $\geq 55\%$  for Temp visa, or CTR  $\geq 50\%$  for residence visa ), or marked LVH type appearances on CXR should be referred for an ECG (reported) and ECHO. If this is an incidental finding, with no other medical history of note – these can be requested by themselves, without a formal Cardiology assessment.

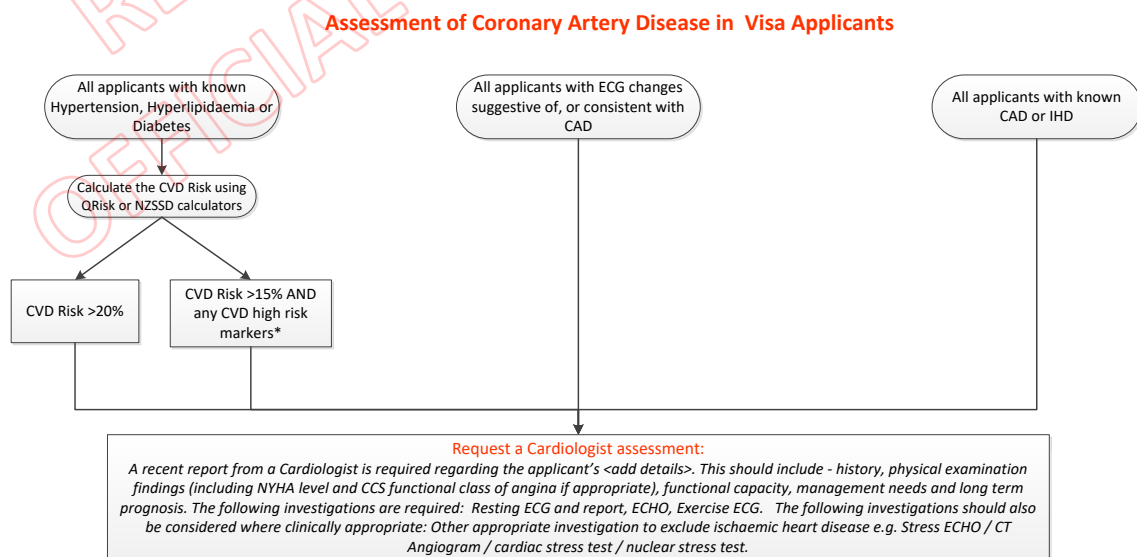
However, if the applicant has any known cardiac conditions or other high risk markers\* then a formal Cardiology assessment, including ECG, ECHO and an Exercise ECG should be requested.

## CAD / IHD ASSESSMENTS

A formal Cardiologist assessment should always be considered for all applicants with:

- Known CAD or IHD
- ECG changes suggestive of, or consistent with CAD
- CVD Risk  $>20\%$
- CVD Risk  $>15\%$  and any CVD high risk markers\*

This should always include a request for ECG, ECHO and Exercise ECG.





**\*High risk markers indicating significant increased cardiovascular risk include:**

- Uncontrolled hypertension;
- Uncontrolled hyperlipidaemia;
- LV impairment of any sort;
- Regional Wall Abnormalities (RWMAs);
- Peripheral vascular disease;
- Cerebrovascular disease;
- DM II with complications;
- Multiple or recurrent previous cardiac events;
- Implantable Cardioverter Defibrillators (ICD);
- Atrial fibrillation (AF);
- High calcium score on CT.

**Cardiac Investigations:**

The initial investigation should always include an ECG, ECHO and Exercise ECG.

Exercise ECG - the applicant needs to achieve a minimum of 85% maximum heart rate (MHR) otherwise this is considered non-diagnostic. If the test is non-diagnostic, then CAD is not excluded and further assessment is required.

If an applicant is unable to do an Exercise ECG, or if the Exercise ECG is non-diagnostic or reported as equivocal, then an equivalent test can be requested by an MA. For example a minimally invasive test such as a CT angiography/calcium score. It can be useful to always include this option in the proforma wording (see below).

Invasive screening e.g. coronary angiogram **should not** be requested by an MA because of the risks associated with these tests. However, if a Cardiologist has recommended further assessment with an angiogram, then it is ok for the MA to request this information.

**The proforma Cardiologist FIR request should be used and should be modified as needed, for example: include the following:**

*A recent report from a Cardiologist is required regarding the applicant's CVD Risk. This should include - history, physical examination findings (including NYHA level and CCS functional class of angina if appropriate), functional capacity, management needs and long term prognosis. The following investigations are required: Resting ECG and report, ECHO, Exercise ECG. The following investigations should also be considered where clinically appropriate: Other appropriate investigation to exclude ischaemic heart disease e.g. Stress ECHO / CT Angiogram / cardiac stress test / nuclear stress test.*

If the applicant has other related abnormalities, such as Hypertension or an abnormal creatinine and eGFR, then additional information can be added to this FIR request. For example a cholesterol profile or protein : creatinine ratio.

### **Old Coronary Angiogram reports:**

It can be really useful to ask for a copy of any previous angiogram reports. This can be a simple way of identifying whether people are at risk of progression of pre-existing disease. If an applicant had an MI and is reported to have had a stent, always consider requesting a copy of the angiogram report as part of the new Cardiologist FIR.

Requesting the previous angiogram report allows you to review the old information and identify if there were other stenoses that might now be considered clinically significant. For example, the applicant may have had a stent placed for a 90% stenosis, but the angiogram report shows that there were 4 other 50% stenoses that were not stented at the time. Depending on the time frame, these could now have progressed to being a significant risk. In this scenario it would be important to then ask the Cardiologist to comment on the applicant's risk of a further event.

Alternatively, there might have been 2 other 20% lesions which are not likely to have progressed over time and can safely be managed with medical treatment only. Assuming all the rest of the FIR information is normal (i.e. ECG, ECHO and Exercise ECG), there would be no need further cardiac investigation at this point in time.

## **CAD / IHD OUTCOMES**

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### **Positive Exercise ECG:**

- If the applicant has had a positive Exercise ECG as part of this assessment (or a recent medical assessment) they are most likely to be NOT ASH.
- It is then the applicant's responsibility to provide further information that supports an ASH outcome.

### **Residence Visa:**

- **NOT ASH Reason:**  
*Chronic recurring medical condition(s) likely to impose significant costs in excess of NZ\$41,000 over the predicted course of the Condition(s)*
- **Please make it clear that:**  
*The applicant has had a positive exercise ECG result, consistent with Coronary Artery Disease. It is highly likely that the applicant will also require cardiac intervention such as cardiac stenting or bypass surgery. The applicant's suspected Coronary Artery Disease is a chronic, recurring condition considered likely to impose significant costs in excess of \$41,000 over the course of the applicant's condition.*
- Please **only** use the A4.10.1 condition when you have specific evidence that the applicant has a 'severe ischaemic heart disease' such as a cardiologist letter stating this.

- You **do not** need to include costs as part of your NOT ASH reason.

**Temporary Visa:**

- **NOT ASH Reason:**

*Likely to impose significant health costs OR demands*

- **Please make it clear that:**

*The applicant has had a positive exercise ECG result, consistent with Coronary Artery Disease. It is highly likely that the applicant will require cardiac intervention such as cardiac stenting or bypass surgery. The applicant's suspected Coronary Artery Disease is considered likely to impose significant costs and demands on the New Zealand health system.*

- You **do not** need to include costs as part of your NOT ASH reason.

**Positive Exercise ECG with recent stenting or a bypass:**

If the applicant has had a positive Exercise ECG as part of this assessment (or a recent medical assessment) they may also provide evidence of subsequent cardiac stenting or bypass surgery.

If the applicant has been successfully treated and the time since intervention is sufficient to confirm this (usually 3 months post intervention), it may be appropriate to give them an ASH or AWC outcome. However, it is important to ensure that you have all the relevant information before providing an outcome.

If the applicant has not provided a new full Cardiologist report, including current examination findings, a copy of the angiogram report, details of what intervention has occurred and when, as well as a follow up assessment post intervention (including a new ECHO and Exercise ECG, or suitable alternative), then further information is required. A new Cardiologist FIR should be requested.

**Residence Visa:**

If necessary, the applicant can be deferred for up to 3 months to allow for recovery and a new Cardiologist assessment post intervention. This new Cardiologist assessment must include: current examination findings, a copy of the angiogram report, details of what intervention has occurred and when, as well a new ECHO and Exercise ECG, or suitable alternative. The outcome will depend on the information provided post intervention.

**Temporary Visa:**

This should be approached in the same way as a Residence case and the same information will be required before an outcome can be determined. However, Temporary visas CANNOT be deferred.

**POTENTIAL OUTCOMES:**

**An applicant could be considered ASH if:**

- They have had successful intervention; and
  - They are asymptomatic; and
  - They have no residual abnormalities on ECG, ECHO, Exercise ECG; and
  - They have no other medical reasons why they might be considered NOT ASH.\*\*

**\*\*Other medical reasons that might warrant a NOT ASH outcome:**

- Poor compliance with medication;
- Unfavourable Cardiologist report;
- Other NOT ASH medical conditions.

**An applicant should be considered NOT ASH if:**

- They do not meet the ASH criteria above.

**Residence NOT ASH Reason:**

Chronic recurring medical condition(s) likely to impose significant costs in excess of NZ\$41,000 over the predicted course of the Condition(s)

**Temporary NOT ASH Reason:**

Likely to impose significant health costs OR demands

**NOT ASH wording:**

- Please acknowledge the recent intervention, but make it clear why the applicant still does not meet the ASH criteria.
- Please **DO NOT** use the A4.10.1 condition for Residence visas, as it can be difficult to justify that the applicant has a 'severe ischaemic heart disease'.
- Please **DO NOT** include costs as part of your NOT ASH reason for either visa type.

***If you have any reservations or concerns about what outcome to provide, or how to word the outcome, please discuss the case with a Medical Officer.***

## MURMURS

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All applicants with a murmur need to provide a new, or a recent echocardiogram. This is because we have no way of knowing what degree of valve abnormality they have without imaging. An ECHO dated within the past year is considered acceptable.

**Always** check whether the applicant has any previous cases under Client History before requesting a new assessment. If they do, have a look to see what the most recent ECHO showed and whether there was any advice from a Cardiologist regarding when they would next need a follow up ECHO.

This applies to all visa types. Even an applicant applying for a short 3 month visitor visa may become unwell and need a valve replacement during that time. They may be too sick to send home and may need an immediate valve replacement in New Zealand.

This is a high cost and high demand health condition. If an applicant declines to get an ECHO please discuss this with the Medical Officers, as we cannot be sure they will not impose significant costs and demands on the NZ health system during their visa period.

## VALVE DISEASE

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Any applicant with known cardiac valve disease needs a recent ECHO to confirm that their valve disease is not significant and does not require surgical repair in the near future.

**Always** check whether the applicant has any previous cases under Client History before requesting a new assessment. If they do, have a look to see what the most recent ECHO showed and whether there was any advice from a Cardiologist regarding when they would next need a follow up ECHO.

Depending on the information provided:

- You may not need any further information at this point in time and can provide an outcome;
- You may be able to simply request a new ECHO;
- You may need to request a new Cardiologist assessment with new specialist advice around the need for future valve replacement.

*FIR example: Cardiologist Assessment*

*A new Cardiologist assessment is required regarding the applicant's known Mitral Valve Regurgitation. This should include – history, management to date, current examination findings, ECG, ECHO, ongoing management needs and long term prognosis. In particular, please comment on whether the applicant is likely to require cardiac valve surgery in the future and if so, when.*

**MA Outcomes:**

**Residence Visa applicants:**

- The A4.10.1 INZ Listed NOT ASH conditions include:
  - Valve disease with a high probability of surgical and/or other procedural intervention in the next 5 years.
- Valve replacements may also be considered a chronic, recurring medical condition:
  - For example if the applicant is likely to require several valve replacements over the course of their lifetime.
  - *However, please discuss each case with a Medical Officer before providing a final outcome under chronic, recurring medical condition.*

**Temporary Visa applicants:**

Depending on the degree of valve disease, the applicant may require further assessment when they next apply for a visa.

- A trivial or mild valve abnormality is not generally considered significant and does not need follow up. The applicant can be given an ASH outcome.
- A moderate valve abnormality should be considered significant and an AWC outcome might be given depending on the visa length and any advice from the Cardiologist as to when a replacement is likely to be needed:
  - *The applicant has known cardiac valve disease. The next visa application will require a new Cardiologist assessment regarding the applicant's Mitral Valve Regurgitation. This should include – history, management to date, current examination, ECG, ECHO, ongoing management needs and long term prognosis. In particular, please comment on whether the applicant is likely to require cardiac valve surgery in the future and if so, when.*
- Any applicant with a severe valve abnormality must have a Cardiologist assessment, including requesting the following information:
  - *Please comment on whether the applicant is likely to require cardiac valve surgery in the future and if so, when.*
- If an applicant may require surgery within the timeframe of their visa, they should be considered NOT ASH.

*For example:*

- An applicant applying for a 2 year visa who is reported to be likely to require a Mitral Valve replacement in 3 years time may be considered NOT ASH as their valve disease may progress faster than expected.
- An applicant applying for a 2 year visa who is reported to be likely to require a Mitral Valve replacement in 5 years time should be considered AWC.

## EP STUDIES

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The following information was provided in a NZ Cardiologist report in 2016.

The cost of a screening EP study in private would be \$15,330.00, and a separate later ablation \$25,130.00. However, if this procedure was performed in the public system they would be combined and the cost would be under \$15,000.00. The short term and long term prognosis is excellent and your WPW condition should not affect the quality of your future life.

This would be considered NOT ASH for a Temporary Visa, however does not meet the \$41,000 cost level for a Residence visa.

## PACEMAKERS

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Pacemakers and Implantable Cardioverter Defibrillators (ICD) may be considered high cost, depending on the visa type and time frame. If the applicant is reported to have a Pacemaker or ICD, then further information is required. A Cardiologist assessment should be requested, including the following information:

- *Please comment specifically on the ongoing management needs relating to the ICD including – how often this needs to be checked, how often it needs replacing, whether it is the batteries or the entire unit that is replaced and the cost of repairing / replacing it.*

Depending on when the unit needs replacing and the cost of this, versus the visa length – the applicant may be ASH, AWC or NOT ASH.

## CARDIOMYOPATHY

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Cardiomyopathy is usually progressive and is associated with progressive heart failures, requiring recurrent hospital admissions. Depending on the cause of the Cardiomyopathy, various cardiac interventions may also be required.

### **Residence Visas:**

Cardiomyopathy is an A4.10.1 INZ Listed Condition for Residence visa applications. You will need a cardiologist report outlining the diagnosis and the likely management and treatment.

### **Temporary Visas:**

Temporary visa assessments are less straightforward than the Residence visas. As with many of the cardiac conditions, the applicant's current health status, as well as the rate of progression needs to be considered in relation to the visa length. The type of visa application also needs to be considered, i.e. are they fit for purpose, or are they unable to perform their expected duties due to their cardiac symptoms.





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It is therefore important to ensure that you have a Cardiologist assessment which provides all of this information: *For example:*

*FIR: Cardiologist*

*A recent report from a Cardiologist is required regarding the applicant's known Cardiomyopathy. This should include - history, physical examination findings (including NYHA level), functional capacity, management needs and long term prognosis. The following investigations are required: Resting ECG and report, ECHO, Exercise ECG. Please specifically comment on the underlying cause of the applicant's Cardiomyopathy, the impact on the applicant's daily functioning and ability to work, as well as the expected rate of progression over time.*

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## **APPENDIX ONE: CVD RISK SCREENING – A GUIDE FOR MEDICAL ASSESSORS**

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Written by Dr Rob Kofoed (Medical Officer), 2016

### **Background:**

Even though the government has announced a decrease in the total number of permanent residents, there will still be 45-50,000 per annum new permanent residents of which about 10-15% would be over 55 years of age (the majority from UK, India, China, SE Asia and the Pacific).

If we didn't screen any of these applicants, then the cost to our health services would be significant. Hypothetically, if we estimate that 20% of these applicants have diabetes and/or CVD and if the cost per annum for each individual with CVD and/or diabetes is an extra \$2400 (this figure is based on a study from CMDHB in 2008 estimating that on average, each person with CVD and/or diabetes is associated with \$2,400 more health care costs compared to a person without CVD or diabetes.- see: [www.cmdhb.org.nz/About\\_CMDHB/Planning/Health-Status/Health-Status.htm](http://www.cmdhb.org.nz/About_CMDHB/Planning/Health-Status/Health-Status.htm) ) then the annual cost of not screening for this cohort is approximately an extra \$2,500,000 on our health services; and as 45-50,000 new residents arrive in each year this will increase by \$2,500,000 each year during the lifetime of all these new residents.

As MAs our role is to assess cardiovascular risk to reduce the average health cost per person (knowing that we won't be able to reduce this to zero) by screening out the highest risk applicants. By screening for the highest risk applicants and NOT ASHng those who do not meet the current ASH criteria as described in the Immigration Instructions, this should significantly reduce the average cost per person as individuals in higher risk groups are likely to incur the highest health costs.

### **CVD Risk assessment:**

The cardiovascular risk calculators and tools we currently use are population based calculators designed primarily to determine when cost effective targeted intervention is recommended at each level of risk.

As MAs we are using these calculators to determine if an individual is at a high level of risk and form an opinion on whether the applicant's condition will likely result in high cost health services for that individual.

### **What Calculators?**

To get consistency we should all be using the same cardiovascular risk calculators. During a discussion with Professor Rod Jackson from the University of Auckland in 2016, his comments were:

*'We have developed new CVD risk prediction equations, which will be available shortly, but they are designed for people already living in NZ. They will include an option to predict risk for Pacific peoples, which no other risk calculators have, so that would be useful for screening people from the Pacific Islands. It will also include options for predicting risk for Indians and*



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*Chinese. As far as I am aware only the UK QRISK calculator also includes these ethnicities (<https://qrisk.org/2016/>)  
If people already have a personal history of CVD, then their risk is probably over 20% in 5 years. However it is really difficult to know if any of these calculators would apply to people from other countries, particularly low and middle income countries and also those with multi-morbidities. They may have very different risks and there is no good data available. I really wouldn't know how to estimate risk in these groups and your guess would be as good as mine.'*

Following this discussion it was decided to use the QRisk calculator for non-diabetics and the NZSSD calculator for diabetics or applicants with HBA1c >50: <http://www.nzssd.org.nz/cvd/>

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## **APPENDIX TWO: ATRIAL FIBRILLATION AND ABLATION**

The following link is for a NZ Ministry of Health report from 2012 regarding “Catheter Ablation for the Treatment of Atrial Fibrillation”. It contains background information on Atrial Fibrillation, including NZ specific information and may be of interest in better understanding the significance of Atrial Fibrillation in our immigration applicants.

[http://www.moh.govt.nz/notebook/nbbooks.nsf/0/69B1EE7B091E66E8CC257F7F00789C2E/\\$file/catheter-ablation-technology-note-jul2013.pdf](http://www.moh.govt.nz/notebook/nbbooks.nsf/0/69B1EE7B091E66E8CC257F7F00789C2E/$file/catheter-ablation-technology-note-jul2013.pdf)

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## Background

The following document contains basic information on how to manage a variety of common and/or significant Diabetic cases. As with many medical conditions the presentation, clinical course and management of Diabetes can vary greatly and the recommendations in this document should be adapted as needed, to suit each individual case. However, NOT ASH outcomes relating to Diabetes can be particularly difficult to document correctly and where a specific NOT ASH reason has been provided, it is strongly recommended that you use these as this will aid in preventing confusion among applicants and LIAs, as well as prevention of complaints and IPT involvement in Residence applications.

*If you are unsure of the correct outcome for any Diabetic case, please contact the Medical Officers for their advice.*

**Note: Terminology relating to Diabetes**

It is useful to remember that different countries use different terminology for various conditions and tests. For example: microalbumin:creatinine ratio can be written as MAU or ACR. For this reason, it is important to avoid using abbreviations that may be misunderstood when requesting FIR.

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## Type I Diabetes

This should be assessed and managed the same as Type II Diabetes (see the rest of this document).

### ADDITIONAL CONSIDERATIONS

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Many Type I Diabetics have Insulin Pumps and while these are potentially high cost (approximately \$6,000 per year for monitoring, medication and the pump through Pharmac), this cost shouldn't be taken into consideration when assessing the medical.

If the applicant is well controlled, with no complications, they should be considered AWC for Temp, or ASH for Residence. However, if the applicant is poorly controlled, or has significant complications, then they should be considered as likely NOT ASH.

If the applicant is borderline and it is not clear whether an AWC, ASH or NOT ASH outcome is most appropriate – please contact The Auckland based Medical Officers to discuss this.

## Type II Diabetes

### DIABETES AND HBA1C

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#### HBA1c <60 +/- medication:

- Is considered well controlled for Immigration purposes and is not of concern.
- The applicant's 5y CVD Risk should still be calculated and recorded in the MA comments.
- Assuming the 5y CVD Risk is <15% and there are no associated diabetic complications and no other abnormalities on the medical:
  - Residence: ASH
  - Temp: AWC or ASH
- If the 5y CVD Risk is  $\geq 20\%$  a Cardiologist assessment is recommended. This should always include a request for an ECG, ECHO and Exercise ECG.
- If there are any other associated diabetic complications, consider requesting further information from the relevant specialist (e.g. Ophthalmologist, Nephrologist).

#### HBA1c >80 +/- medication:

*Also consider for*

#### **HBA1c $\geq 60$ with comorbidities OR if this is a new diagnosis of Diabetes**

- An Endocrinologist assessment should be requested.
  - The proforma wording for this should be used and includes all the additional tests that are needed: retinal screening report, peripheral vascular exam, smoking history, reported ECG, creatinine, eGFR, microalbumin:creatinine ratio (ACR).



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- A Cardiovascular Risk Assessment (CVD Risk) should also be calculated.
- There is no need to wait until the Endocrinologist assessment report comes back to calculate the CVD Risk.
- If the applicant has a CVD Risk between 15 - 20%, consider requesting a Cardiologist assessment if the applicant has any associated significant risk factors (e.g. poorly controlled BP / high cholesterol) or any known complications (e.g. proteinuria, diabetic retinopathy, peripheral neurovascular disease).
- If the applicant has a CVD Risk  $\geq 20\%$ , or has any ECG changes consistent with CAD, then a Cardiologist assessment is recommended. This should always include a request for an ECG, ECHO and Exercise ECG.

## VISA OUTCOMES

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Visa applicants with Diabetes will have different outcomes depending on their overall Diabetes control and associated complications.

### **ASH Outcome:**

If an applicant has well controlled Diabetes with: HBA1c  $\leq 60$ , no associated complications and a 5y CVD Risk  $< 15\%$  then an ASH outcome should be considered for any visa type.

### **ASH with Conditions (AWC) Outcome:**

If an applicant has poorly controlled Diabetes and/or any associated minor complications and/or a 5y CVD Risk  $\geq 15\%$  +/- a favourable Cardiologist assessment, then an AWC outcome should be considered for a temp visa:

- *The applicant has Diabetes. The next visa application will require a new HBA1c, creatinine, eGFR, microalbumin:creatinine ratio, lipid profile, Blood Pressure, smoking history and a medication list.*
- Consider also adding:
  - An ECG if the applicant is  $> 40$  years +/- higher risk for CAD.
  - A retinal screening report.

### **NOT ASH Outcome:**

If an applicant has uncontrolled Diabetes and/or severe diabetic complications and/or a significantly abnormal Cardiologist assessment, then a NOT ASH outcome should be considered.

### **Newly Diagnosed Diabetics:**

If the applicant is a newly diagnosed diabetic with uncontrolled HBA1c ( $\geq 75$ ), consider requesting an Endocrinologist assessment. This allows for a full assessment, with appropriate advice and management to be given. Alternatively, if the applicant is in New Zealand, you could request the same information from a General Practitioner.



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If the applicant has been started on appropriate treatment and there are no associated complications and/or a 5y CVD Risk <15%, the following outcomes should be considered:

- Temp Visa: AWC
- Residence Visa: Deferral for 3 months to allow for further assessment on treatment.

## ADDITIONAL TESTS

The panel physician should have provided a microalbumin:creatinine ratio (aka : MAU or ACR) result as a routine additional test for any applicant with Diabetes. However, if this has not been provided, you do not need to do a specific request just to obtain this result.

The same applies to Lipid / Cholesterol profiles – it is not necessary to do a separate request to obtain this information. The 5y CVD Risk can be calculated without these (see below).

Instead, the microalbumin:creatinine ratio and a lipid profile should be included in any request for Further Information – e.g. if you are requesting a Cardiologist or Endocrinologist assessment, or alternatively included in any future conditions for Temp visas.

## CARDIOVASCULAR RISK IN DIABETICS

If an applicant has Diabetes, you should **ALWAYS** calculate their 5y CVD Risk using the NZSSD online calculator: <https://www.nzssd.org.nz/cvd/> and then record this result in the MA comments section.

**It is not necessary to request any additional information before calculating their CVD Risk.**

The applicant's age, ethnicity, height, weight and blood pressure will be recorded in the examination findings.

The MA should assume the lowest possible risk for any information that they do not have.

I.e. assume that the applicant:

- has never smoked;
- total cholesterol = 4, HDL = 1.2;
- ACR is normal.

**If the applicant has a CVD Risk  $\geq$ 20%, or has any ECG changes consistent with CAD:**

- A Cardiologist assessment is recommended.
- This should include a request for an ECG, ECHO, Exercise ECG.

**If the applicant has a CVD Risk between 15 - 20%:**

- Consider requesting a Cardiologist assessment if the applicant has:
  - any associated significant risk factors\*
  - any known complications of their Hypertension (e.g. proteinuria).





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\*High risk markers indicating significant increased cardiovascular risk include:

- Uncontrolled hypertension;
- Uncontrolled hyperlipidaemia;
- LV impairment of any sort;
- Peripheral vascular disease;
- Cerebrovascular disease;
- DM II with complications;
- Multiple or recurrent previous cardiac events;
- Implantable Cardioverter Defibrillators (ICD);
- Atrial fibrillation (AF);
- High calcium score on CT.

*Note:*

*When assessing CVD Risk for a Fijian Indian please use "Indian" ethnicity not "Pacific".*

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## Further Info Required:

This guide is to for HAT IO to request further test/report in which there is ONLY ONE CONDITION on the medical.

The conditions highlighted in dark blue are being used in conjunction with Multiple Failure Points. Please refer to the Multiple Failure Points guideline for details. When any other multiple conditions are noted, please discuss with onsite MO.

FIR condition	Further test/report required	Recommended outcome when the test/report received
A preterm baby born at 35 weeks or earlier, who is aged ≤2 yrs old at the time that the medical was done	Specialist letter: A letter from the applicant's GP or Paediatrician is required regarding the child's development, due to pre-term delivery. Please provide the following information – history of pregnancy and delivery and post delivery period, current physical and developmental examination, medical problem / diagnosis list, current medications. In particular please provide details regarding the following questions - - were there any complications post-delivery? Did the child require any time in NICU / SCBU? Has the child performed / reached milestones as expected (allowing for their prematurity)? Are there any concerns about the child's growth or development?	Refer to MA
Heart murmur	Heart murmur- please provide Echocardiogram.	Normal → ASH Abnormal → Refer to MA
Depression/Anxiety	Psychiatrists report under IHS 'Further Requirements' tab	Refer to MA
Syphilis	Syphilis management information under IHS 'Further Requirements' tab	If the applicant has received treatment of syphilis in the past or is currently on going treatment – ASH  Unsure information, please discuss with onsite MO.
Hep B: HBsAg positive	HBsAg positive- Please provide HBeAg, HBV DNA, LFTs, AFP, Liver ultrasound report, Liver Fibroscan (dated within the last 3 years) and a current medication list.	Refer to MA
Hep C: HCV positive	Please refer to "Hep C Guidelines for HAT V2. October 2017"	
HIV	HIV Specialist report under IHS "Further Requirements" tab	Refer to MA
eGFR < 30	Nephrologist Report Under IHS "Further Requirements" tab	Refer to MA
Diabetes Hba1c 41-60 mmol/mol (5.9-7.6%)	For residence application only. Before discussing with onsite MA, please ensure the health case has following results, please request if needed.  Diabetes- the following tests are required: Hba1c, medication list, smoking status and BP  *If age > 40 years old, reported ECG is also required.	Discuss with onsite MA
Hba1c > 80	Endocrinologist Report Under IHS "Further Requirements" tab	Refer to MA

Urinalysis	If abnormal urine dipstick x 2, follow the below	
	Further test/report required	Recommended outcome when the test/report received
Positive Blood	Haematuria- Please provide Laboratory urinalysis results	Normal → ASH Abnormal → Refer to MA
Positive Glucose	Check if HbA1C is within normal range or abnormal	Normal HbA1C → ASH Abnormal HbA1C → Refer to HbA1C guidelines
Positive Protein	Urinalysis abnormal- Please provide Laboratory urinalysis to include Protein: Creatinine Ratio.	Refer to MA

Cardiomegaly	Further test/report required	Recommended outcome when the test/report received
CTR<55% and ≤40 years old for a temporary visa	N/A	ASH with Conditions – Repeat CXR
i) CTR>55% or >40 years old for a temporary visa ii) Any cardiomegaly for a resident visa	Cardiomegaly- Please provide Echocardiogram and ECG	Refer to MA

ADHD	Further test/report required	Recommended outcome when the test/report received
<u>ADHD in Adults</u> If an adult is reported to have ADHD, either taking or not taking medication	Psychiatrists report:  A recent report from a Psychiatrist or treating physician is required regarding the applicant's ADHD. Please forward a report addressing history, diagnosis, current management, required health care and community services, and prognosis. Please include information about any restrictions on the applicant's ability to live independently or work, history of any hospital admission or any history of substance abuse/dependence.	Refer to MA
<u>ADHD in Children (school age)</u> If a Child is reported to have ADHD, either taking or not taking medication	Specialist report:  A report from a specialist Paediatrician and/or developmental Psychologist is required regarding the applicant's ADHD, cognitive and developmental status. This should include - history, clinical examination findings, the results of any additional investigations performed, diagnosis, management needs and long term prognosis. Please provide the details of any social or educational services required by the applicant (e.g. Occupational Therapist, Speech Language Therapist, Teacher Aide). Please also attach recent school report from the applicant's school, along with the details of any special education services required (e.g. an Individual Education Plan) or currently received by the applicant.	Refer to MA

Thyroid Cancer	Further test/report required	Recommended outcome when the test/report received
	<p>Specialist report:</p> <p>An Endocrinologist or Head and Neck Surgeon assessment is required regarding the applicant's thyroid cancer. This should include - history, diagnosis including histology and staging, clinical examination findings, the results of any recent investigations performed, ongoing management needs and long term prognosis – including a 5 year risk of recurrence, 5 year survival rate and details of any further surgical intervention required. Please also comment on the applicant's functional and work capacity.</p>	Refer to MA

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## Disability / Full time care

The following costs are for MA education / awareness only.

**DO NOT QUOTE COSTS IN YOUR MA COMMENTS / OUTCOMES**

### GENERAL DISABILITY COSTS:

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The following information was provided in 2017 by a specialist consultant who does disability consulting for the Ministry of Health (MOH):

*It is really difficult to determine the degree of support that someone would need without any information other than diagnosis, as even within a single diagnosis, there are varying degrees of need.*

#### Low level of Care:

- *A minimum need would be some personal care a week for personal hygiene and dressing etc which could vary from once daily to more frequent. Assuming they live with family then I will assume morning only and perhaps with intermittent continence during day so say 10hours per week.*
- *Carer support in this situation would be approximately 15 days per annum.*
- *The above assumption is \$16,963 per annum.*

#### Moderate level of care:

- *More complex health conditions requiring more support would double that.*
- *Approximately \$34,000 per annum.*

#### Residential Care:

- *From the age of 20y there is also the fiscal risk of residential care if family can no longer provide support at home.*
- *The minimum cost for this would be about \$45000 per annum, but probably higher.*

#### Additional costs for applicants who require care / support:

- *They may qualify for Ministry of Social Development vocational funding of about \$35,000 per annum (5 days per week).*
- *Disability allowance – varies depending on their medical costs.*

The following information was obtained in 2017 from the Taikura Trust (Auckland), who support clients from birth to age 65y who have a vision, hearing, intellectual or physical disability, or Autism Spectrum Disorder:

**Services Available include:****Carer support days:**

- *These can vary from a minimal amount such as 10 days per year up to 50 days a year according to need.*
- *Carer support days are allocated to enable the carer to have regular breaks to maintain their resilience.*
- *However a family may also use these to enable their family member to expand their circles of support by attending holiday programs or other social events etc without relying on their immediate family all the time.*
- *Carer support days are allocated at \$76.00 a day.*

**Personal care support:**

- *Can be allocated from as little as 1 hour a week to as much as needed.*
- *Personal cares include assisting the client to shower or dress etc as required.*
- *Personal care hours are allocated at \$25.19 through providers.*
- *Or at \$30.43 if the family choose individualized funding where the family are able to choose who provides the services. This provides family and clients with flexibility and choice.*

**Household management support:**

- *Can be allocated from 2 – 4 hours a week, or daily allocations depending on the person's levels of independence and again their family/friends or natural supports.*
- *These hours include supporting the person with house cleaning- basic cooking if required and assisting with shopping etc.*
- *These hours are allocated at \$25.19 through providers. Or at \$30.43 through Individualized funding, as mentioned above.*

**Supported Independent Living:**

- *Can be allocated to support a person to look at living independently -this service assists people with transport skills, managing budgets, finding appropriate housing options, finding employment to meet their needs etc.*
- *Again this could be as little as 2 hours a week, or more regularly e.g. 3 hours a week or more depending on the client's abilities.*
- *These hours are allocated at \$34.00 per hour and are reviewed regularly to ensure outcomes are met and the person is achieving a level of independence with supports.*

**Vision impairment and co-morbidities:**

- *We provide care for disability related needs the DHBs will need to provide any other care / costs that a client requires. This may result in a person receiving dual funding from Disability support services and the local District Health boards.*

## Geriatrics / Older People

Anyone  $\geq 70$ y needs an ADLs assessment and an MMSE as part of their routine medical assessment.

These should also be added when giving an AWC outcome for a person in their late 60's, who is likely to be  $\geq 70$ y at the time of their next visa application. They could also be added for a younger person who has a medical condition that means they are likely to require care or have memory problems in the future.

A Geriatrician Specialist assessment should be considered if there are any concerns regarding an applicant's:

- memory;
- functional abilities;
- ability to live independently;
- or if they have multiple minor concerns that do not need separate specialist assessments, but collectively are a concern.

The Geriatrician Proforma wording is well written and contains all the useful information that is required. However, be aware that some countries Geriatrician reports are not as detailed as others.

### FULL TIME CARE IN THE COMMUNITY

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When assessing an older person, always consider their functional abilities and whether they might need daily assistance or care in the community – as they could be considered Non Waiverable. If their function / independence is a concern, then this needs to be specifically mentioned in any NOT ASH outcome. This should include exactly what the concerns are.

If the applicant is Non Waiverable this needs to be stated clearly:

*For example:*

*The applicant requires additional support / care. Requiring care, including in the community, is a Non Waiverable Condition.*

Note: for further information on Medical Waivers see the Non Waiverable Guidelines in the MA Handbook.

## GENERAL ADVICE AROUND CXR

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**ALWAYS check to see if there is an old CXR image in IHS.**

### **2 year follow up for abnormalities:**

- Migrants are more likely to reactivate latent TB within the first 2 years of moving to a new country.
- Active TB is usually able to be seen progressing over a 3 month period.

Therefore, it is reasonable to use a 2 year rule of thumb for abnormal CXR images:

- **If they show stable appearances over a 2 year period, they can be considered ASH**
- **If appearances change during this time period, further assessment of the abnormality will be required.**

### **NZ Chest clinic assessments:**

Please consider the advice of the NZ based RPs when they are reviewing our applicants in chest clinic. However:

- Keep in mind that they don't necessarily understand how the visa process works.
- If you strongly disagree with their opinion or advice:
  - Discuss with the Medical Officers; OR
  - Request an INZ RP opinion on the case.

## CHEST X-RAY ABNORMALITIES IN EVALUATION OF TUBERCULOSIS

---

### **Features of active disease ALWAYS need a Chest clinic for TB assessment:**

- Possible patchy consolidation or infiltration.
- Definite infiltration or consolidation or cavitation.
- Larger focal areas of scarring.

### **Features of previous TB with a low probability of reactivation do not require a Chest clinic for TB assessment:**

- Calcified lymph nodes, with normal parenchyma.
- Minor apical pleural thickening only.
- Single granuloma less than 10 mm.

**These should be made AWC for Temp visas and ASH for Residence.**

### **Further info for MA knowledge:**

- Opacities are often seen apico-posteriorly in the upper and to a lesser extent, the apical segment of the lower lobes. As the disease progresses, there is more extensive consolidation and cavities develop, which is associated with increased infectivity. Cavity formation is uncommon in primary TB.



- A 'miliary pattern' describes the CXR appearance of tiny, evenly distributed nodules. This pattern represents haematogenously disseminated TB.
- Atypical or diminished CXR appearances are seen in conditions associated with varying degrees of immunosuppression such as diabetes and HIV/AIDS.

## EXTRA PULMONARY TB

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- Pleural and mediastinal lymph node disease are classified as extra-pulmonary TB.
- TB pleural effusion is classified as an extra-pulmonary form of TB.
  - The CXR appearance of the lung parenchyma is often normal in active pleural TB.
  - A chest wall ultrasound should be considered for further assessment of a pleural effusion, where active TB is a consideration.
  - If a pleural effusion is identified, then FNA / ultrasound guided aspiration of the pleural fluid is required for smear and culture for M.Tuberculosis.
- A normal CXR does not exclude extrapulmonary TB, and testing for this should be pursued if there are suggestive systemic or site-specific symptoms.

## NOT ASH / DEFERRAL OUTCOMES

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Consider using the following wording or including this information as part of your Deferral or NOT ASH outcome for active TB:

*When the applicant next applies they need to provide the following information : A final chest clinic assessment dated at least one month after completion of treatment with the following information – details of treatment (drugs, names, dates), the results of any positive sputum cultures including drug sensitivities, current physical examination, 3 x new sputum smears and cultures taken at the completion of treatment (and cultured for 6-8 weeks, with drug sensitivities if any are positive for MTB), a new PA CXR image and report taken at least one month after completion of treatment, ongoing management needs and long term prognosis.*

This will ensure that when the applicant next applies, or provides their post deferral information, you will get exactly what you need to determine the outcome, without having to ask for more information.

# Appendix One: Pregnancy and Immigration medical examinations

Reference Document prepared by Dr John Robson, CMO, 2016

## BACKGROUND

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Immigration New Zealand (INZ) conducts around 200,000 health examinations per year. During this process women are asked if they are pregnant as pregnancy generates some issues with the medical examination and further investigations. Immigration New Zealand has provided protection for the pregnant women in the Panel Physician Instructions and designed eMedical to 'set aside' the chest x-ray if the women declare that she is pregnant. This document will review the current INZ process and review what we understand from the information we have and make recommendations for the future.

## CURRENT SITUATION

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Pregnancy creates some issues for the Immigration medical screening process. It has been perceived that radiation possess a risk to the foetus (reference needed) and therefore should not be undertaken. In addition to this, pregnancy is also likely to alter blood tests and the physical examination that are undertaken;

- The lower limit for haemoglobin is usually 115 g/L, but for pregnant women the lower limit is usually reported as 100 g/L as a result of haemodilution
- Iron deficiency anaemia is the most frequent haematological concern during pregnancy and is usually characterised by decreased haemoglobin, mean cell volume (MCV) and mean cell haemoglobin (MCH) levels. When iron deficiency is suspected, a measurement of serum ferritin should be used to confirm the diagnosis
- Decreased or increased platelets<sup>1</sup> is possible but a platelet level of  $150 \times 10^9/L$  or less is abnormally low and should be discussed with a haematologist<sup>2</sup>
- The total white cell count will frequently be elevated ( $15 - 18 \times 10^9/L$ ) in pregnancy due to increased numbers of neutrophils
- Elevated Hba1c as gestation diabetes affects around 5-8% of pregnant women
- ALP markedly increased due to placental isoenzyme.
- Creatinine clearance increases
- Blood pressure is lower in the first two trimesters with a corresponding increase in heart rate, although the blood pressure should be normal in the third trimester.

Immigration New Zealand provides some instructions for panel physicians who are undertaking medical examinations in pregnancy women which are focused around the chest x-ray;

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<sup>1</sup> <http://www.bpac.org.nz/Supplement/2008/May/complete-blood-count.aspx>

<sup>2</sup> <http://www.bpac.org.nz/BT/2011/July/pregnancy.aspx>

## Pregnant women and x-ray examinations

All women of reproductive age should be asked about the date of their last menstrual period. This is because INZ does not recommend x-ray exposure during pregnancy. Pregnant applicants should be advised that they do not need to proceed with a chest x-ray examination while pregnant. Pregnant applicants may be required by INZ to undergo a chest x-ray examination after giving birth, should they apply for a further visa.

## Medical History section

### **B18 Are you pregnant? What is the expected date of delivery?**

If the applicant declares that they are pregnant enquire as to whether the pregnancy is progressing normally, add comments if there are any complications. If the applicant has a letter from their own doctor or lead maternity carer (obstetrician) confirming their pregnancy, scan and attach it to the health case, or if not, ask the applicant if they are willing to have a BHCG test added to the standard blood tests required. If they are unwilling to undergo the blood test they may be required to provide a letter from their doctor or lead maternity carer (obstetrician) to confirm their pregnancy and the expected date of delivery (EDD).

## Limited Medical

### **B5 Are you pregnant? What is the expected date of delivery?**

For the Limited medical examination this question is only required in order to establish whether a chest x-ray examination can be undertaken. If the applicant is pregnant, INZ does not require a chest X-ray examination. Answering 'yes' to this question will automatically set aside any chest x-ray examination requirement in eMedical.

If the applicant declares that they are pregnant they should provide a letter from their own doctor or lead maternity carer (obstetrician) confirming their pregnancy. This letter should be scanned and attached to the health case. Otherwise the applicant should be asked if they are willing to have a BHCG test added to the standard blood tests required. If they are unwilling to undergo the blood test they may be required to provide a letter from their doctor or lead maternity carer (obstetrician) to confirm their pregnancy and the expected date of delivery (EDD).

### **Part 3: Completing a 502 Chest x-ray examination (Chest X-ray Certificate (INZ 1096))**

Children under 11 years of age and women who are pregnant are not required to undergo a chest x-ray examination unless requested by INZ.

## **Women**

All female applicants who declare they are pregnant should be advised that INZ does not require a chest x-ray examination and that their chest x-ray examination will be set aside.

## RADIATION AND PREGNANCY

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The effects of radiation are related to the foetal exposure to effective dose and to the stage of pregnancy. Following the 2<sup>nd</sup> – 3<sup>rd</sup> week of pregnancy the main risks are induction of childhood cancer and leukaemia, as well as neurological effects<sup>3</sup>. The dose of radiation from a chest x-ray is <0.01 mGy and the Royal Australian and New Zealand college documents state that because the abdomen is not exposed to the beam, and if the chest x-ray can be justified, it should proceed in the normal way.

Currently our FCC partners carry out chest x-rays in pregnant women and have stipulated the requirement for correct x-ray procedures (i.e. collimation) and double lead shielding to minimise any risk.

Women and procedures followed for pregnancy

*CXRs are the routine method to screen female applicants, who could be pregnant, for TB. Panel physicians must ask female applicants about pregnancy and the last menstrual period.*

*Almost all imaging tests expose the foetus to such low levels of radiation that they are not a cause for concern. The International Commission on Radiological Protection (ICRP) has stated that deterministic risks such as these would not be expected to occur in an embryo or foetus that had been exposed to less than 100 mGy of radiation. (Ref: [www.insideradiology.com.au](http://www.insideradiology.com.au), Radiation risk of medical imaging during pregnancy, ©RANZCR® 2010).*

*Any radiological examination of the mother that does not involve the direct irradiation of the foetus will deliver a comparatively low dose to the foetus. (Ref: HPA: Protection of Pregnant Patients during Diagnostic Medical Exposures to Ionising Radiation (RCE-9) March 2009.)*

*The ICRP has stated that deterministic risks such as these would not be expected to occur in an embryo or foetus that had been exposed to less than 100 mGy of radiation. If the pelvis or abdomen is not in the direct beam the foetal dose is usually <1 mGy. The typical foetal dose of a CXR is 0.001–0.01 mGy.*

*People are exposed to background radiation in their daily activities which varies widely in different parts of the world due to the radioactivity of the soil, latitude, height above sea level and lifestyle (predominantly indoors or outdoors).*

*The radiologist responsible for the radiological examination should take all reasonable steps to advise the pregnant applicant of the potential risks of radiation exposure of the foetus. For pregnant patients, written informed consent is only recommended if the pelvis is in the direct beam and this consent is required prior to the radiological exam. If consent is not provided, the panel physician should provide the option of delaying the CXR and TB clearance until after delivery.*

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<sup>3</sup> Royal Australian and New Zealand College of Radiology Policy library Diagnostic Radiology and Pregnancy November 2005

Panel radiologists have an ethical obligation to ensure pregnant applicants are adequately protected, using double wrap around abdominal and pelvic shielding when appropriate. Be vigilant in avoiding unnecessary radiation exposure. Panel physicians must adhere to national guidelines where applicable. <sup>4</sup>

Immigration New Zealand has set aside the chest x-ray requirement and has built rules in eMedical to achieve this. During the 501 medical examination the applicant will be asked if she is pregnant. If she answers 'yes' to this questions then the chest x-ray will be set aside.

Name	Optional / Mandatory	Action	Values	Business Rules
This exam does not need to be completed as the applicant is pregnant. If the exam has been undertaken do you need to record results?	Mandatory if displayed	Radio button group	- Not selected - No - Yes	Default to 'Not selected'.  BR-PD13 – <u>Australian low TB risk and New Zealand cases only</u> : Display if 'Is the applicant pregnant' is 'Yes'.
This exam has been 'Set aside' and does not need to be completed as the applicant is pregnant.		Label		BR-PD14 – <u>Australian low TB risk and New Zealand cases only</u> : Display if 'This exam does not need to be completed as the applicant is pregnant. If the exam has been undertaken do you need to record results?' is 'No'.
Applicant has undertaken the x-ray and has agreed to the declaration below		Label		BR-PD35 – <u>Australian low TB risk and New Zealand cases only</u> : Display if 'This exam does not need to be completed as the applicant is pregnant. If the exam has been undertaken do you need to record results?' is 'Yes'.

<sup>4</sup> **Technical Instructions for Tuberculosis Screening and Treatment** Five Country Conference, Immigration Refugee Health Working Group February 2016.

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## **PURPOSE OF THIS DOCUMENT**

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The information in this document provides guidance about how haemophilia is diagnosed and how to word your opinions.

## **BACKGROUND**

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Severe haemophilia is a non-waiver condition under A4.60(a) of Immigration Instructions.

## **DIAGNOSIS OF HAEMOPHILIA**

---

Haemophilia can be difficult to detect through blood tests. We rely on the applicant's medical history and the examination by the Panel Physician to determine if an applicant has haemophilia.

A history of the following symptoms may indicate haemophilia:

- spontaneous or pathological:
  - bruising or swelling
  - bleeding into joints, muscles or soft tissues
- a history of blood or blood product transfusion.

## **ASSESSING HAEMOPHILIA FOR ASH REQUIREMENTS**

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If you suspect haemophilia, always make a FIR for a haematologist's assessment so you can exclude it or assess its severity.

## **ASH OUTCOMES FOR APPLICANTS WITH HAEMOPHILIA**

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Your opinion for any applicant with severe haemophilia must be NOT ASH no matter what type of visa they are applying for.

Include the following statement in your opinion:

The applicant has haemophilia. Haemophilia is a non-waiver condition.

This signals to the IO that:

- they cannot consider a medical waiver for residence visa applicants, and
- an Exception to Instructions (ETI) is not an appropriate outcome for a temporary visa applicant.

If the haematologist's report suggests that the applicant's haemophilia is mild and would not require hospitalisation or specialist input, discuss the results with our MOs. In some cases these applicants may be considered ASH or AWC.

## Hepatitis B Assessments – HAT Update Sept 2018

As you all know, some of the anti-viral medications used for the treatment of Hepatitis B changed to generics in July 2018. This means that the majority of the anti-virals that are used in NZ for Hepatitis B are no longer considered high cost. As a result, we need to rethink our Hepatitis B assessment outcomes. IHT are working with Ed Gane, Hepatologist at the National Liver Unit and the Ministry of Health, to develop new formal guidelines, but in the meantime we have developed the following interim guidelines.

### HAT assessment of Hepatitis B:

All applicants who are Hep B positive applicant require the following information to determine an outcome:

- HBeAg
- HBV DNA
- LFTs
- AFP
- a new Liver ultrasound
- Liver Fibroscan report (dated within 3 years of the current medical assessment)

ALL of this information is required to be able to determine the applicant's current standard of health. Each result provides essential information about whether the applicant needs anti-viral medication, has fibrosis / cirrhosis, has HCC or any other complications relating to their Hepatitis B.

### HAT to request:

For every Hepatitis B applicant, please request the following information BEFORE referring the case to an MA:

#### **FIR: Hepatitis B Tests:**

Please provide an HBeAg, HBV DNA, LFTs, AFP, a recent Liver Ultrasound report, a Liver Fibroscan report (dated within 3 years of the current medical assessment) and a current medication list.

*Note:*

**Liver Ultrasound** – this should be a recent report.

**Liver Fibroscan** – this can be dated within the past 3 years.

**Remember – not every country can do Fibroscans (e.g. Tonga) – if they state they cannot provide one, please discuss the case with Danielle / Rob.**



## Summary of likely MA Outcomes:

### Hep B Temporary Visas:

Hep B, no meds, no complications	AWC
Hep B, on meds, no complications	AWC
Hep B +/- meds, with complications : the outcome will depend on visa length + exact complications	NOT ASH <i>or</i> Discuss with Danielle / Rob

*Note: complications include HCC, undetermined liver lesions, cirrhosis, Fibroscan >8.5kPA, varices etc*

### Hep B Residence Visas:

Hep B, no meds, no complications	ASH
Hep B, on meds, no complications	NOT ASH – A4.10.1 Listed Condition: Hepatitis B surface antigen positive and meeting criteria for anti-viral treatment in NZ
Hep B +/- meds, with complications OR at high risk of complications	NOT ASH – A410.1 Listed Condition: Severe, chronic or progressive renal or hepatic disorders

*Note: complications include HCC, undetermined liver lesions, cirrhosis, Fibroscan >8.5kPA, varices etc*

### Recommended NOT ASH Wording: A4.10.1 INZ Listed condition – Hep B on medication.

*The applicant has Hepatitis B and is currently taking (name of medication) for this. The applicant's Hepatitis B with the associated medication is an A4.10.1 INZ Listed condition.*

### Recommended AWC Wording:

AWC Box notes:

- The applicant has Hepatitis B and is on anti-viral medication for this. The next visa application will require the following information:

Conditional FIR: 'Hepatitis B Test'

- Please provide the following information – HbeAg, HBV DNA, LFTs, AFP, a new Liver Ultrasound scan, Liver Fibroscan report (dated within 3 years of this visa application), current examination findings, a medical diagnosis list and a current medication list.

## **Background information for those who are interested:**

### **Temporary Visas:**

#### **AWC outcome:**

Anti-viral medications are no longer high cost for temporary visas.

Applicants who are currently taking, or are likely to need anti-viral medications can be given an AWC outcome.

AWC Box notes:

- The applicant has Hepatitis B and is on anti-viral medication for this. The next visa application will require the following information:

Conditional FIR: 'Hepatitis B Test'

- *Please provide the following information – HbeAg, HBV DNA, LFTs, AFP, a new Liver Ultrasound scan, Liver Fibroscan report (dated within 3 years of this visa application), current examination findings, a medical diagnosis list and a current medication list.*

#### **NOT ASH outcome:**

Applicants who have cirrhosis / HCC or other complications secondary to their Hepatitis B are likely to be considered NOT ASH.

However, occasionally, these applicants may be stable and considered suitable for a short visa period.

### **Residence Visas:**

IHT have been in contact with the MOH to discuss Hepatitis B, the Immigration Instructions and our current legal requirements. Until we have any further information / advice from the MOH, we must continue to follow the Immigration Instructions, as they are written.

#### **The A4.10.1 INZ Listed Conditions include:**

- Hepatitis B surface antigen positive and meeting criteria for anti-viral treatment in New Zealand.
- Severe, chronic or progressive renal or hepatic disorders.

#### **ASH Outcomes:**

No medications or complications secondary to their Hepatitis B.

#### **NOT ASH Outcomes:**

These are unchanged and the MAs should continue to follow the current Hepatitis B guidelines for Residence visa applications.

#### **Anti-viral medication:**

Applicants who are currently on, or are recommended to start anti-viral medications are NOT ASH under the A4.10.1 Listed condition of Hepatitis B.

As per the 2016 Hep B Guidelines, this includes any applicant who is:

- HBeAg positive and ALT  $\geq 40$  for at least 6 months;
- HeAg negative and HBV DNA  $\geq 2000$  IU/mL and at least moderate liver fibrosis (Biopsy  $\geq F2$ ; Liver Stiffness  $\geq 6$  kPa);
- Hep B positive and is currently on, or is recommended to start anti-viral medication.

**Recommended NOT ASH Wording:**

- A4.10.1 INZ Listed condition – Hep B on medication.
  - *The applicant has Hepatitis B and is currently taking (name of medication) for this. The applicant's Hepatitis B with the associated medication is an A4.10.1 INZ Listed condition.*

**Liver related complications:**

Applicants who currently have, or are considered high risk for future liver related complications (irrespective of the need for anti-viral medication) are NOT ASH under:

A4.10.1 Listed condition of a severe, chronic or progressive hepatic disorder;

or

A4.10.1 Cancer condition (if they have HCC or suspected HCC).

As per the 2016 Hep B Guidelines, this includes any applicant who is:

- Hep B positive and has severe fibrosis (biopsy stage F3 or F4, OR fibroscan reading of  $\geq 8.5$  kPa, OR any clinical, laboratory or radiologic evidence of cirrhosis);
- Previous or suspected HCC;
- Known Cirrhosis +/- complications such as varices.

**Recommended NOT ASH Wording:**

- A410.1 INZ Listed Condition – severe, chronic or progressive hepatic disorder OR cancer depending on the specific issue.
  - The MA can write this as they normally would. No specific wording needs to be used.
  - However, the NOT ASH reasoning should focus on the liver related complication, not on any medication they may be taking.
  - This indicates to the Branch IO that the applicant has a significant long term condition and that they should NOT be considering a waiver simply because the medication is no longer high cost.

# Hepatitis C Guidelines for Immigration New Zealand Medical Assessors

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## WHY HAVE THESE GUIDELINES BEEN DEVELOPED?

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The management of Hepatitis C within New Zealand changed in July 2016, when Pharmac introduced funding for some of the newer Directly Acting Anti-virals (DAAs) to be used for the treatment of Hepatitis C. This resulted in General Practitioners (GPs) becoming directly involved in the treatment of Hepatitis C for the first time. New guidelines have therefore been developed for GPs and Gastroenterologists to allow for the appropriate and correct management of Hepatitis C positive patients<sup>1</sup> ([Hep C treatment has changed](#)).

New INZ Guidelines for the assessment of Hepatitis C positive visa applicants have therefore been developed.

## BACKGROUND OF HEPATITIS C IN NEW ZEALAND

---

Hepatitis C (HCV) is a virus that is contracted through direct exposure to blood or body fluids which, if not cleared or treated, causes inflammation of the liver. Most newly acquired HCV infections **within NZ are from injectable drug use**. Other risk factors include:

- exposure to contaminated blood products (prior to July 1992);
- incarceration (high rate of HCV in prison, where tattooing is common);
- antenatal transmission (5% of new-borns of an HCV positive mother are infected despite best precautions) and;
- infection through a medical or dental procedure or a blood transfusion in a HCV high risk country (Eastern-Europe, Middle East, North Africa, Western and Central Sub-Saharan Africa, Central Asia and the Indian Subcontinent).<sup>1</sup>

It is estimated that only 50% of the 50,000 New Zealanders who are infected are aware they have HCV<sup>2</sup>. When people become infected only 25 -30% of people experience non-specific and often mild symptoms. Approximately 20 -25% of people clear the virus spontaneously, usually within 12 weeks. Around 75 – 80% of people will therefore develop chronic HCV and may not be aware of the fact until later in life, when they already have complications such as cirrhosis.<sup>1</sup> Of those with chronic HCV, 2 – 4% of people will develop Hepatocellular Carcinoma (HCC).<sup>1</sup> There is no vaccine available to prevent HCV.

Active Hepatitis C or HCV related complications (such as fibrosis, cirrhosis or HCC) are considered high cost health conditions within the INZ Immigration Instructions.<sup>3</sup> See Appendix One for detailed Immigration Instructions.

## COSTS OF HEPATITIS C IN NEW ZEALAND

---

Hepatitis C Drug Treatment:	approximately \$80k per treatment		
Liver transplant process:	\$180k	Cost of HCC Surveillance	\$2k pa
Resection only of an HCC:	\$30k	Cost of treating a small HCC	\$50-200k

NOTE : These costs are based on personal communication with Dr Ed Gane, Hepatologist and Director of the National Liver Transplant Service.

## Medical Management of Hepatitis C

### HCV DIAGNOSIS

The Diagnosis of Active Hepatitis C usually involves three steps:<sup>1, 4</sup>

#### Hepatitis C Virus Serology

- |                            |   |   |
|----------------------------|---|---|
| Anti-HCV or HCV Ab         | → | Indicates HCV exposure (screening test) |
| HCV RNA level (viral load) | → | Confirms active HCV infection           |
| HCV genotyping             | → | Determines the treatment regime         |

#### Screening = Anti-HCV or HCV Ab

The Immigration Health Team (IHT) had a positive rate of 0.4%, or 399 individual applicants, in 2016.

Clinic Country	Birth Country	
<b>New Zealand</b>	171	
<b>India</b>	66	124
<b>Cambodia</b>	39	49
<b>China</b>	28	67
<b>Philippines</b>	9	14
<b>Rest of the world</b>	86	145
<b>Grand total</b>	<b>399</b>	<b>399</b>

- **Positive:** An HCV RNA is required to confirm active HCV infection.
- **Negative:** If active HCV is suspected or the person is known to have current or previous HCV, then the screening HCV serology should be repeated in 3 months.

**Note:** A person can be re-infected with HCV following treatment – anyone who continues to have high risk behaviours such as IV Drug use, should have their HCV RNA repeated.

#### Confirmation of active HCV = HCV RNA level

- **Positive:** the person needs genotyping and treatment.
- **Negative:** with no history of previous HCV treatment – the person may have spontaneously cleared the virus.



Note: HCV RNA can have brief periods where it is not detected despite the person having active HCV. So if there is no history of previous HCV treatment, the HCV RNA should always be repeated in 3 months.

### **Genotyping**

Genotyping is required for all active HCV to assist in determining the most appropriate treatment regime. Approximately 55% of the HCV cases diagnosed in New Zealand are Genotype 1a or 1b.

### **PRE-TREATMENT ASSESSMENT<sup>1,4</sup>**

---

Routine investigations recommended prior to starting treatment include:<sup>1</sup>

- Liver elastography (Fibroscan or Shear Wave Elastography)
- FBC
- LFTs, including AST
- INR
- Renal Function
- Hepatitis B (risk of reactivation of Hepatitis B with co-infection)
- HIV (ARVs and DAAs can have serious interactions)
- Pregnancy test (Ribavirin is a potent teratogen)
- Physical examination

### **FIBROSCAN**

---

The NZ Society of Gastroenterologists strongly recommends a fibroscan is performed in all people with Active HCV prior to starting treatment.<sup>4</sup>

- The fibroscan result can alter the Drug Treatment Regime and may mean the person requires active supervision by a Gastroenterologist (rather than a GP).
- A fibroscan result performed post-treatment when Sustained Viral Response (SVR) has been achieved will be markedly lower than a pre-treatment result due to reduced inflammation post treatment and cannot be used to determine cirrhosis status.

Pre-treatment fibroscan results indicate:<sup>4</sup>

Either:

- <10.5kPA →excludes cirrhosis
- 10.5 – 12.5kPA →bridging fibrosis / transition to cirrhosis
- >12.5kPA →likely cirrhosis

Or:

- F0-F2 →no cirrhosis
- F3-4 →suggests cirrhosis



## **LIVER BIOPSY**

---

Liver Biopsy does not have a routine role in staging, but may be useful if:<sup>4</sup>

- There is diagnostic uncertainty regarding the
  - A. degree of fibrosis vs cirrhosis, or
  - B. the cause of the person's Liver Disease.
- If a fibroscan was not performed pre-treatment then a liver biopsy is the only way to determine cirrhosis status after SVR.

The following investigations are only recommended if there is evidence of Decompensated Chronic Liver Disease (as determined by history, examination, blood results):<sup>4</sup>

- Abdominal Ultrasound scan
- AFP

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## Treatment Regimes

### NEWLY FUNDED ORAL DIRECT ACTING ANTIVIRALS (DAAS)

The Genotype variant and the results of the pre-treatment investigations determine the drug treatment regime. Three new oral DAAs have been approved by Pharmac, in addition to the pre-existing funded drug treatment regimes.

Treatment is usually 12 weeks long, with Sustained Viral Response (SVR) **ALWAYS** confirmed at 12 weeks post completion of treatment.

**Note:** The following Treatment Regimes are current as of April 2017; however, these are likely to change over time. An applicant may also choose to import drugs from overseas, where newer treatment regimens may be available. If a Specialist states that a treatment regime is appropriate for the applicant's genotype, then this should be considered as an acceptable treatment.

Genotype I Drug Treatment Regimes <sup>4</sup>		
Viekira Pak <sup>A</sup>	= Paritaprevir, Ritonavir, Ombitasvir and Dasabuvir	Genotype 1b SVR = 12 weeks post completion of treatment
Viekira Pak-RBV <sup>A</sup>	= Paritaprevir, Ritonavir, Ombitasvir and Dasabuvir PLUS Ribavirin (RBV)	Genotype 1a SVR = 12 weeks post completion of treatment
HARVONI	= Ledipasvir with Sofosbuvir	Only funded in NZ if there is already cirrhosis.
SOVALDI	= Sofosbuvir + peg-INF/RBV OR Sofosbuvir + RBV	Under specialist supervision only

<sup>A</sup>*Viekira Pak and Viekira Pak-RBV should NEVER be used for treatment of Genotypes 2, 3, 5 and 6 as the treatment will not be effective and could result in increased viral resistance.*



#### Genotypes 2, 3, 4, 5 and 6 Drug Treatment Regimes<sup>4</sup>

##### *Require Specialist Supervision*

Pegylated Interferon (Peg-INF) <sup>B</sup>	Compensated cirrhosis
HARVONI <sup>B</sup> = Ledipasvir with Sofosbuvir	Decompensated cirrhosis
Sofosbuvir + Daclatasvir for 12 weeks <sup>C</sup>	Not funded
Sofosbuvir + Ledipasvir for 12 weeks (+ RBV if Genotype 3) <sup>C</sup>	Not funded
Sofosbuvir + peg-INF/RBV for 12 weeks <sup>C</sup>	Not funded
Sofosbuvir + RBV for 12 Or 24 weeks <sup>C</sup>	Not funded

##### <sup>B</sup> PHARMAC FUNDED Drug Treatment Regimes

- PEG-INF - based therapy is the only funded therapy for compensated patients with these Genotypes.
- HARVONI - may be funded for these Genotypes in certain situations – for example decompensated cirrhosis.

<sup>C</sup> These Drug Treatment Regimes are NOT FUNDED for these Genotypes in New Zealand, but can be considered approved treatment regimes.

These unfunded Drug Treatments can be obtained by:

- self-funding and importing a 12 week supply of the medication, or
- self-funding HARVONI, or
- by participating in a Clinical Trial being conducted within New Zealand.

*Note : New Drug Treatments are constantly being developed and trialled – if the Specialist reports the client is on a treatment appropriate for their genotype, which is not on this list, it should be considered an acceptable treatment. However, SVR should ALWAYS be determined at 12 weeks post completion of treatment.*



## **MONITORING DURING TREATMENT**

---

HCV RNA levels should not be repeated during treatment because the response on treatment does not predict the final treatment outcome and does not predict relapse.<sup>4</sup>

## **POST TREATMENT TESTS**

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### **Sustained Viral Response (SVR)**

Non detectable HCV RNA level at a specific time period post completion of treatment:

- This will always be 12 weeks, no matter which Drug Treatment Regime is used.
- SVR cannot be confirmed during treatment, or at a time period earlier than 12 weeks post completion of treatment.
- Approximately 5% of people will relapse and will have a positive HCV RNA level at 12 weeks post completion of treatment.
- Most relapse occurs within the first 4 weeks. At present there are no effective medications to treat people who relapse, however some are under development.

### **Liver Function Tests**

- Should be performed routinely post treatment, at or after the expected SVR time period.
- This allows for:
  - Detection of other chronic conditions that can affect liver function including:
    - Fatty Liver / Metabolic Syndrome;
    - Hepatitis B;
    - Alcohol use;
    - Drugs.
  - An indication of risk of HCC long term:
    - The degree of pre-existing fibrosis determines the ongoing risk, not the specific level of the LFTs.

## **Relevance of these changes to Immigration New Zealand**

INZ process and assessment outcomes should be consistent with “Best Medical Practice” within New Zealand for all high cost health conditions. Active Hepatitis C or HCV related complications (such as fibrosis, cirrhosis or HCC) are considered high cost health conditions within the Immigration Instructions<sup>3</sup> (Appendix One).

The following updated Guidelines are therefore recommended for the Assessment of Hepatitis C in INZ visa applicants.



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## Flowcharts

The management and assessment process of Hepatitis C Positive applicants, for the Health Assessment Team (HAT) and Medical Assessors (MAs) can be found in the following Flowcharts:

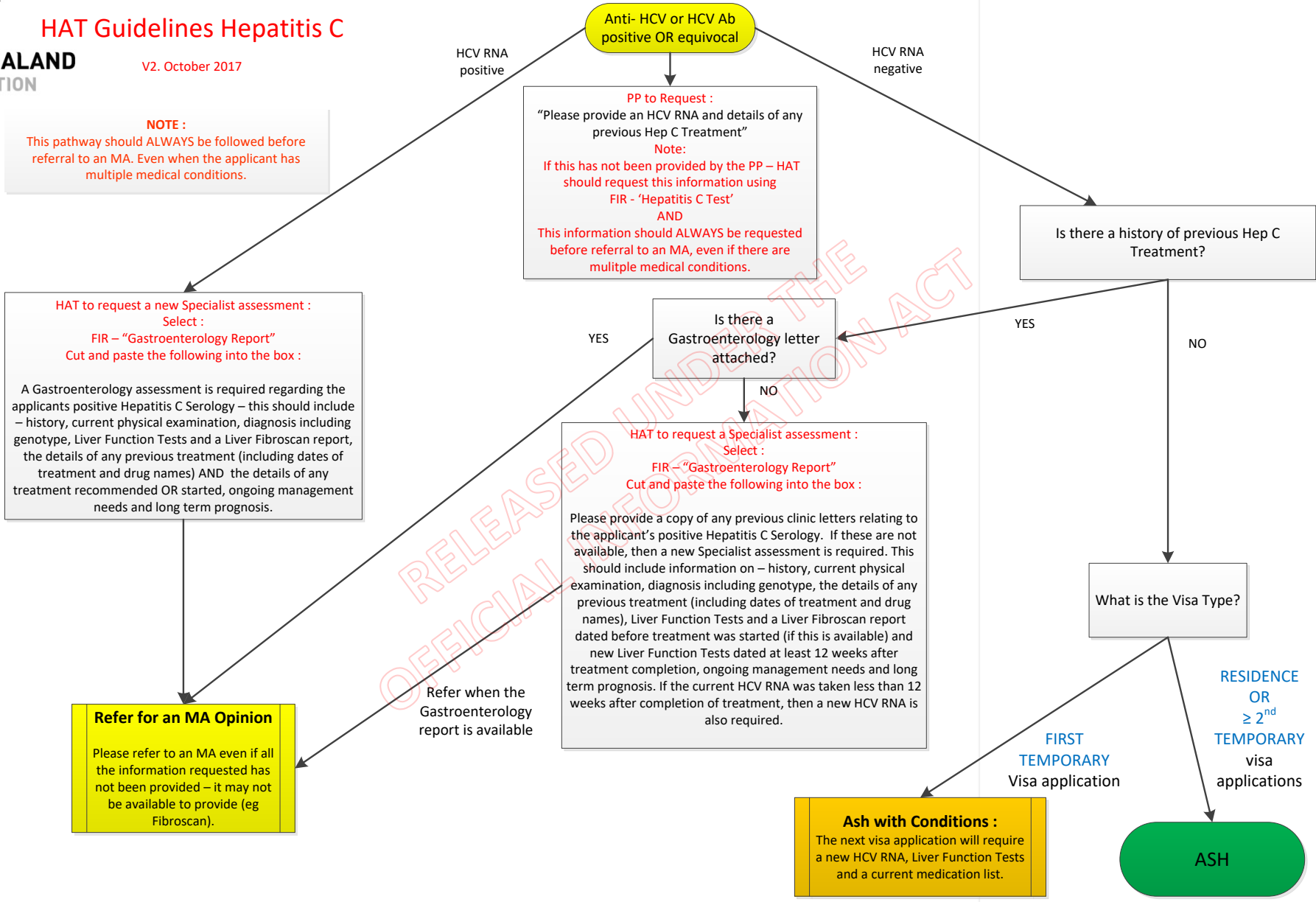
- HAT Guidelines Hepatitis C
- MA Guidelines Hepatitis C Flowchart A
- MA Guidelines Hepatitis C Flowchart A – Appendix
- MA Guidelines Hepatitis C Flowchart B
- MA Guidelines Hepatitis C Flowchart C

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# HAT Guidelines Hepatitis C

V2. October 2017

**NOTE :**  
This pathway should ALWAYS be followed before referral to an MA. Even when the applicant has multiple medical conditions.



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**MA Guidelines Hepatitis C –  
Flowchart A**

V2.October 2017

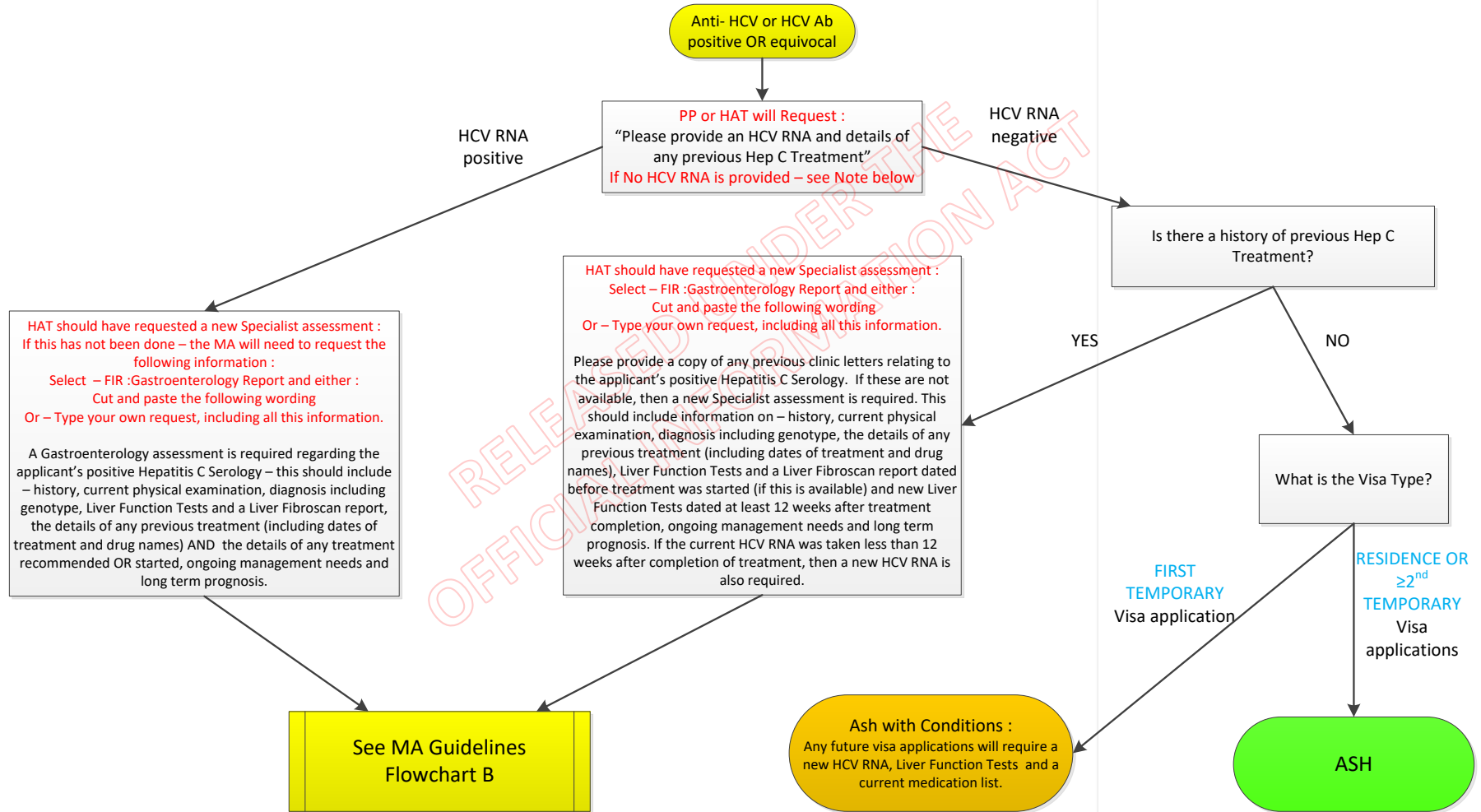
**If no HCV RNA has been provided by the PP or HAT :**

Do two separate requests :

FIR- Hepatitis C Test : A new HCV RNA level is required. Please also provide details of any previous Hepatitis C Treatment.

AND :

FIR : Other : Dear HAT – if the HCV RNA is positive – please follow the HAT Hep C Flowchart and request the appropriate information before referring the case back to the MA for assessment.



<b>Genotype I Drug Treatment Regimes :</b>		
<b>Viekira Pak<sup>1</sup></b>	= Paritaprevir, Ritonavir, Ombitasvir and Dasabuvir	<b>Genotype 1b</b> SVR = 12 weeks post completion of treatment
<b>Viekira Pak-RBV<sup>1</sup></b>	= Paritaprevir, Ritonavir, Ombitasvir and Dasabuvir PLUS Ribavirin (RBV)	<b>Genotype 1a</b> SVR = 12 weeks post completion of treatment
<b>HARVONI</b>	= Ledipasvir with Sofosbuvir	Only funded in NZ if there is already cirrhosis.
<b>SOVALDI</b>	= Sofosbuvir + peg-INF/RBV OR Sofosbuvir + RBV	

<sup>1</sup>*Viekira Pak and Viekira Pak-RBV should NEVER be used for treatment of Genotypes 2,3,5 and 6 - as the treatment will not be effective and could result in increased viral resistance.*

<b>Genotypes 2, 3, 4, 5 and 6 Drug Treatment Regimes :</b>		
<b>Pegylated Interferon (Peg-INF)<sup>2</sup></b>		Compensated cirrhosis
<b>HARVONI<sup>2</sup></b>	= Ledipasvir with Sofosbuvir	Decompensated cirrhosis
<b>Sofosbuvir + Daclatasvir for 12 weeks<sup>3</sup></b>		Not funded
<b>Sofosbuvir + Ledipasvir for 12 weeks (+ RBV if Genotype 3)<sup>3</sup></b>		Not funded
<b>Sofosbuvir + peg-INF/RBV for 12 weeks<sup>3</sup></b>		Not funded
<b>Sofosbuvir + RBV for 12 Or 24 weeks<sup>3</sup></b>		Not funded

<sup>2</sup>*PHARMAC FUNDED Drug Treatment Regimes :*

*PEG-INF - based therapy is the only funded therapy for compensated patients with these Genotypes.*

*HARVONI - may be funded for these Genotypes in certain situations – for example decompensated cirrhosis.*

<sup>3</sup>These Drug Treatment Regimes are NOT FUNDED for these Genotypes in New Zealand, but can be considered approved treatment regimes.

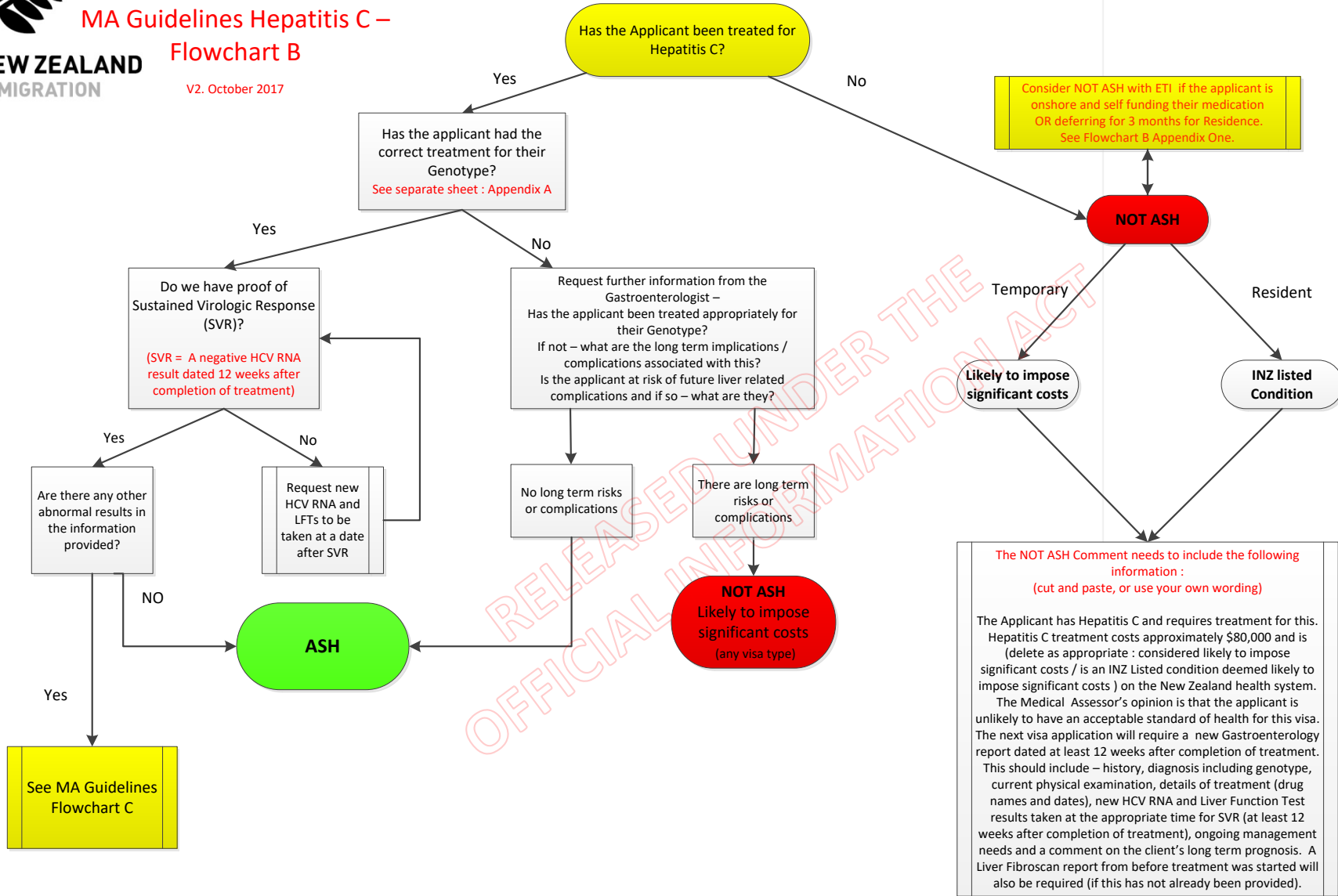
These unfunded Drug Treatments can be obtained by :

- self funding and importing a 12 week supply of the medication, or
- self funding HARVONI, or
- by participating in a Clinical Trial being conducted within New Zealand.

**Note :** New Drug Treatments are constantly being developed and trialled – if the Specialist reports the client is on a treatment appropriate for their genotype, which is not on this list, it should be considered an acceptable treatment.

**MA Guidelines Hepatitis C –  
Flowchart B**

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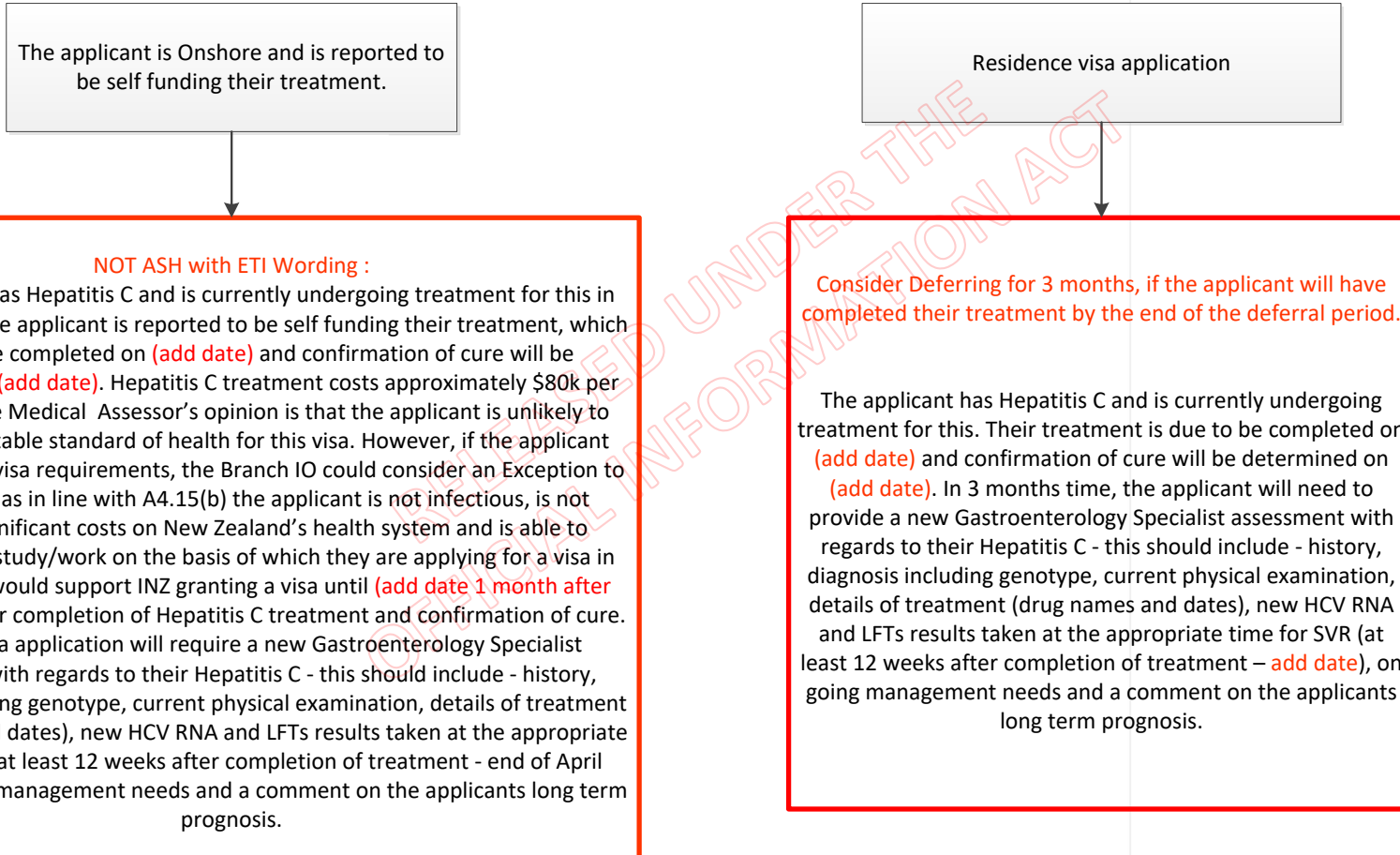


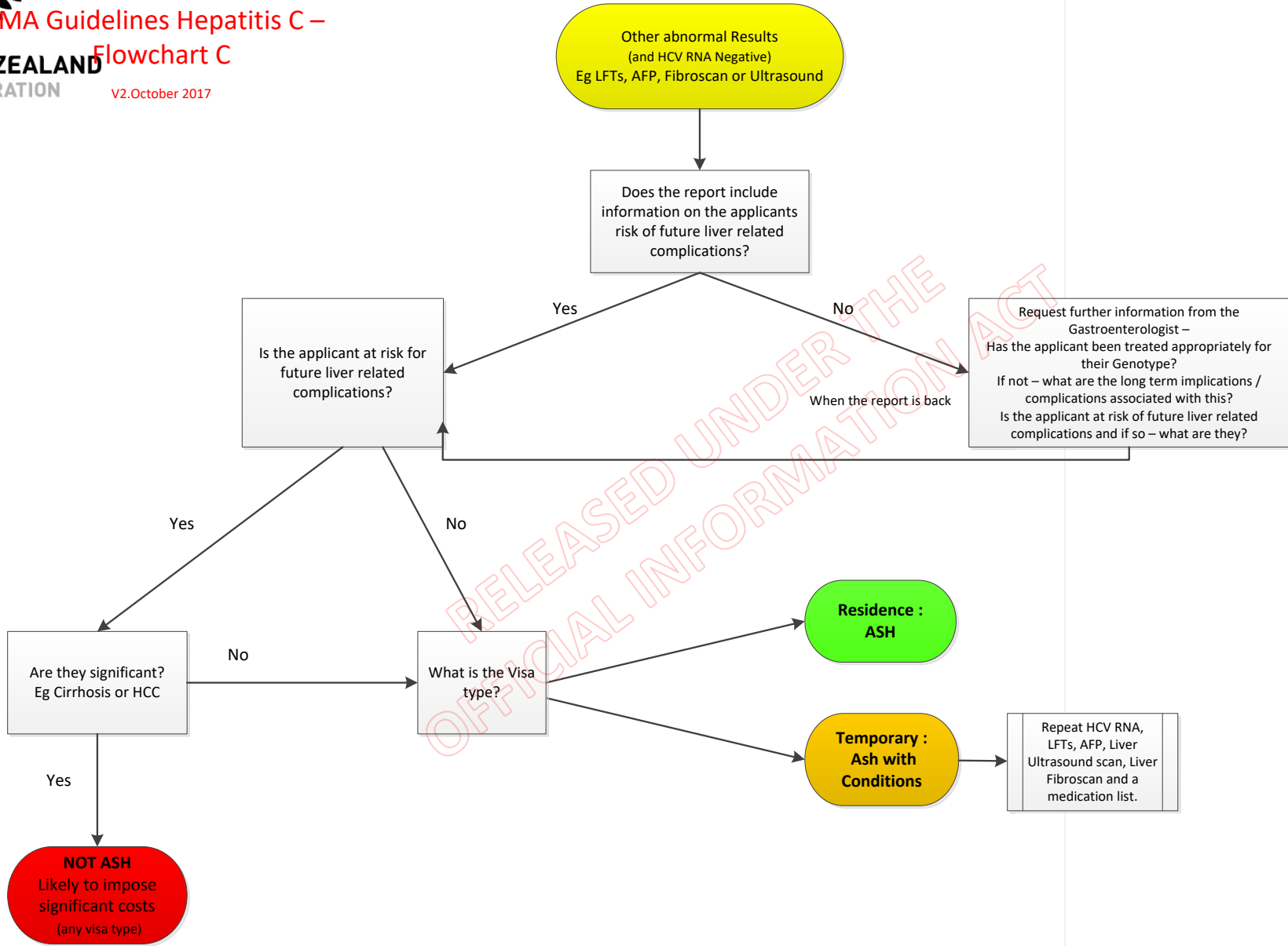


**MA Guidelines Hepatitis C –  
Flowchart B. Appendix One**

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When providing a NOT ASH Outcome  
AND :







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## References

1. Best Practice Issue 77 SE September 2016 – The treatment of Hepatitis C has changed.
2. [www.hepatitisfoundation.org.nz](http://www.hepatitisfoundation.org.nz)
3. <http://onlineservices.immigration.govt.nz/opsmanual/index.htm>
4. NZ Society of Gastroenterology HCV Treatment Guidelines. November 2016 update.

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## APPENDIX ONE

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### Residence Applications

#### A4.10 Acceptable standard of health (applicants for residence)

a. Applicants for residence class visas must have an acceptable standard of health unless they have been granted a medical waiver or (f), below, applies. An application for a residence class visa must be declined if any person included in that application is assessed as not having an acceptable standard of health and a medical waiver is not granted (see [A4.60](#)).

b. Applicants for residence class visas are considered to have an acceptable standard of health if they are:

- i. unlikely to be a danger to public health; and
- ii. unlikely to impose significant costs or demands on New Zealand's health services or special education services; and
- iii. able to undertake the work on the basis of which they are applying for a visa, or which is a requirement for the grant of the visa.

c. The conditions listed in A4.10.1 are considered to impose significant costs and/or demands on New Zealand's health and/or special education services. Where an immigration officer is satisfied (as a result of advice from an Immigration New Zealand medical assessor) that an applicant has one of the listed conditions, that applicant will be assessed as not having an acceptable standard of health.

d. If an immigration officer is not satisfied that an applicant for a residence class visa has an acceptable standard of health, they must refer the matter for assessment to an Immigration New Zealand medical assessor (or the Ministry of Education as appropriate).

e. Despite (d) above, referral to an Immigration New Zealand medical assessor (or the Ministry of Education) is not required where the applicant is the partner or dependent child of a New Zealand citizen or residence class visa holder, unless the provisions of A4.60(a) or A4.60(b) apply.

f. Mandated refugees (see [S3.5\(a\)\(i\)](#)) and Refugee Quota Family Reunification Category applicants (see [S4.20](#)) are exempt from the requirement to have an acceptable standard of health, except where they have any of the conditions set out at [A4.74](#).

#### A4.10.1 Medical conditions deemed to impose significant costs and/or demands on New Zealand's health and/or education services

- HIV infection
- Hepatitis B-surface antigen positive and meeting criteria for anti-viral treatment in New Zealand



- **Hepatitis C-RNA positive and meeting criteria for anti-viral treatment in New Zealand**

- Malignancies of organs, skin (such as melanoma) and haematopoietic tissue, including past history of, or currently under treatment. Exceptions are:

- treated minor skin malignancies
- malignancies where the interval since treatment is such that the probability of recurrence is <10 percent

- Requirement for organ transplants (with the exclusion of corneal grafts), or following organ transplant when immune suppression is required (with the exclusion of corneal grafts)

- **Severe, chronic or progressive renal or hepatic disorders**

- Musculoskeletal diseases or disorders such as osteoarthritis with a high probability of surgery in the next five years

- Severe, chronic or progressive neurological disorders, including but not exclusive to:

- any dementia including Alzheimer's disease
- poorly controlled epilepsy
- complex seizure disorder
- cerebrovascular disease
- cerebral palsy
- paraplegia, quadriplegia
- poliomyelitis
- Parkinson's disease
- motor neurone disease, Huntington's disease, muscular dystrophy
- prion disease
- relapsing and/or progressive multiple sclerosis

- Cardiac diseases, including but not exclusive to:

- severe ischaemic heart disease
- cardiomyopathy
- valve disease with a high probability of surgical and/or other procedural intervention in the next five years
- aortic aneurysm with a high probability of surgical and/or other procedural intervention in the next five years

- Chronic respiratory disease, including but not exclusive to:

- severe and/or progressive restrictive (including interstitial) lung disease
- severe and/or progressive obstructive lung disease
- cystic fibrosis



- Significant or disabling hereditary disorders, including but not exclusive to:
  - hereditary anaemias and coagulation disorders
  - primary immuno-deficiencies
  - Gaucher's disease
- Severe autoimmune disease which may require treatment in New Zealand with immune-suppressant medications other than Prednisone, Methotrexate, Azathioprine or Salazopyrin
- Severe (71-90 decibels) hearing loss or profound bilateral sensori-neural hearing loss after best possible correction at country of origin, where significant support is required, including cochlear implants
- Severe vision impairment with visual acuity of 6/36 or beyond after best possible correction at country of origin, or a loss restricting the field of vision to 15-20 degrees where significant support is required
- Severe developmental disorders or severe cognitive impairments where significant support is required, including but not exclusive to:
  - physical disability
  - intellectual disability
  - autistic spectrum disorders
  - brain injury
- Major psychiatric illness and/or addiction including any psychiatric condition that has required hospitalisation and/or where significant support is required
- Those with a history, diagnostic findings or treatment for MDR-TB or XDR-TB, unless they have been cleared by a New Zealand Respiratory or Infectious Diseases specialist upon review of their file or review of the applicant according to the New Zealand Guidelines for Tuberculosis Treatment

## **Temporary Applications**

### **A4.15 Acceptable standard of health (applicants for temporary entry class visas)**

- a. Applicants for temporary entry class visas must have an acceptable standard of health, unless they have been granted a visitor visa for the purpose of obtaining medical treatment (see [V3.40](#)) or have been granted a medical waiver (see [A4.65](#)).
- b. Applicants for temporary entry class visas to New Zealand are considered to have an acceptable standard of health if they are:
  - i. unlikely to be a danger to public health; and
  - ii. unlikely to impose significant costs or demands on New Zealand's health services during their period of intended stay in New Zealand; and

- iii. (if they are under 21 years of age and are applying for a student visa) unlikely to qualify for Ongoing Resourcing Schemes (ORS) funding during their period of intended stay in New Zealand; and
- iv. able to undertake the work or study on the basis of which they are applying for a visa, or which is a requirement for the grant of the visa.

**A4.15.1 Assessment of whether an applicant for a temporary entry class visa is unlikely to impose significant costs or demands on New Zealand's health services**

a. Assessment of whether an applicant for a temporary entry class visa is likely to impose significant costs or demands on New Zealand's health services will take into account whether there is a relatively high probability that the applicant will need publicly funded health services during their period of stay in New Zealand including, but not limited to:

- hospitalisation;
- residential care;
- high cost pharmaceuticals;
- high cost disability services.

b. The following factors have no bearing on whether an applicant is unlikely to impose significant costs or demands on health services:

- The ability of a person or organisation to pay for health services, pharmaceuticals, or residential care which may be required.
- The ability of an applicant to gain access to the private health system.
- The applicant's possession of health insurance.
- The capacity of family, friends, or a charitable organisation to provide care for an applicant.

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## **PURPOSE OF THIS DOCUMENT**

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This document provides information and guidance to assist with assessing applicants with HIV or taking PrEP to prevent HIV.

## **BACKGROUND**

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Some of the anti-retroviral medications used for the treatment of HIV in New Zealand changed to generics (or are subject to a confidential pricing rebate) in July 2018. This resulted in a change to the outcomes for visa applicants with HIV because the majority of the anti-retrovirals used for HIV are no longer considered high cost.

HIV medications that became generics in 2018 are:

- Truvada – Tenofovir disoproxil fumarate and Emtricitabine
- Atripla – Tenofovir disoproxil fumarate, Emtricitabine and Efavirenz

## **ASSESSING HIV FOR ASH REQUIREMENTS**

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### **Making further information requests (FIRs) to applicants with HIV**

If an applicant with HIV is taking non-generic medication make a FIR for an HIV specialist to:

- confirm the cost of the medication in NZ,
- comment on whether the applicant could be changed to a generic NZ medication at any time in the future.
- Comment on the applicant's compliance with their treatment and monitoring

## **ASH OUTCOMES FOR APPLICANTS WITH HIV**

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### **Temporary entry visas**

AWC

Your opinion will be likely AWC if the applicant has HIV with no complications – that is, HIV which is stable, with no history of, or current associated complications, is compliant with treatment and with a favourable Specialists report.

The AWC conditional FIR should include the following:

- A recent report from an infectious disease specialist is required regarding the applicant's HIV. This should include – history, diagnosis, current clinical examination findings, information about the applicant's HIV status including viral load, CD4 and

AIDS defining conditions, the results of any additional investigations performed, ongoing management needs, compliance with treatment and the applicant's long term prognosis.

#### NOT ASH

Your opinion will be likely NOT ASH if the applicant has HIV and:

- is taking non-generic medication (or taking medication not subject to the Pharmac confidential pricing rebate) which remains high cost, or
- is non-compliant with treatment or their monitoring requirements as outlined by their specialist, or
- is considered to be a public health risk, or
- has or has previously had, secondary complications to their HIV.

#### Residence visas

##### ASH

Your opinion will be likely ASH if the applicant has HIV with no complications – that is, HIV which is stable, with no history of, or current associated complications, is compliant with treatment and with a favourable Specialists report.

Before an ASH opinion the following information is required:

- A recent or updated report from an infectious disease specialist is required regarding the applicant's HIV. This should include – history, diagnosis, current clinical examination findings, information about the applicant's HIV status including viral load, CD4 and AIDS defining conditions, the results of any additional investigations performed, ongoing management needs, compliance with treatment and the applicant's long term prognosis.

##### NOT ASH

Your opinion will be likely NOT ASH if the applicant has HIV and:

- is taking non-generic medication (or taking medication not subject to the Pharmac confidential pricing rebate) which remain high cost, or
- Is non-compliant with treatment or their monitoring requirements as outlined by their specialist, or
- is considered to be a public health risk, or
- has or has previously had, complications secondary to their HIV.



**NEW ZEALAND**  
IMMIGRATION

## **ASH OUTCOMES FOR APPLICANTS TAKING PREP**

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Some applicants are taking PrEP to prevent them from contracting HIV. This medication is not a generic medication in New Zealand and still costs approximately \$830 per month. This means it is high cost for any visa type. However, as this medication is a preventative medication and an applicant is not taking it to treat a medical condition, this medication can be disregarded when assessing a health case.

## **APPENDICES**

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*Funded Antiretrovirals*

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## BACKGROUND

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The Immigration Health Team (IHT) is currently working towards making a change to the INZ Immigration Instructions at A4.25(h) as they are out of step with New Zealand's commitment as a member state of the World Health Organisation (WHO), to the WHO's 'End TB Strategy'.

The important features of this strategy are to ensure continuity of, and adherence to, TB treatment in order to ensure treatment is completed and to avoid the development of Multidrug- Resistant TB (MDR-TB). If migrants fear deportation, or loss of employment due to their TB status, they are likely to attempt to conceal their need for medical care and delay seeking TB treatment. This increases the likelihood of further TB disease being spread, and the development and transmission of MDR-TB.

An interim MA assessment process is required until the Instructions are changed. This process will aim to enable any onshore Temporary Visa Applicants with Active TB to be appropriately treated in NZ and then have their visa status reassessed post treatment. Communication with the Branch IO aims to reduce the number of cases that are asked to provide Disputing Information and are then returned for a second MA Assessment – this will also speed up the Visa process and reduce the stress on the applicant.

## RESIDENCE VISAS OFFSHORE: DEFER FOR 6 MONTHS

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Once an **OFFSHORE** applicant has been **CONFIRMED** as having active TB:

1. The MA should record an audit item for Active TB.
2. The MA should Defer the case for 6 months to allow for completion of treatment, using the following wording:
  - a. The applicant is being deferred for 6 months, to allow for completion of TB treatment. In 6 months time the applicant will be required to provide a copy of the final TB Chest Clinic letter. Please also provide a copy of the end of treatment Chest xray image performed by the Hospital (DICOM or JPEG format). Please note, a new Chest xray specifically for Immigration purposes does not need to be done.  
*Note : A CXR is only required for Pulmonary or Pleural TB, not extrapulmonary.*
3. When the information is returned following the 6 month Deferral period, the MA should assess the case and should confirm that the Specialist has no concerns regarding the

treatment efficacy / success and that the applicant no longer poses a danger to public health. The applicant can then be given a 'Likely ASH' Opinion.

4. If the applicant has MDR-TB or XDR-TB then the case requires an Opinion from a New Zealand based Respiratory Physician BEFORE providing the final MA Opinion. *(See the later section on how to do this).*

## **RESIDENCE VISAS ONSHORE: DEFER FOR 6 MONTHS**

---

Once an **ONSHORE** applicant has been **CONFIRMED** as having active TB:

1. The MA should record an audit item for Active TB.
2. The MA should Defer the case for 6 months to allow for completion of treatment, using the following wording:
  - a. The applicant is being deferred for 6 months, to allow for completion of TB treatment. In 6 months time the applicant will be required to provide a copy of the final TB Chest Clinic letter. Please also provide a copy of the end of treatment Chest xray image performed by the Hospital (DICOM or JPEG format). Please note, a new Chest xray specifically for Immigration purposes does not need to be done.  
*Note : A CXR is only required for Pulmonary or Pleural TB, not extrapulmonary.*
3. When the information is returned following the 6 month Deferral period, the MA should assess the case and should confirm that the Specialist has no concerns regarding the treatment efficacy / success and that the applicant no longer poses a danger to public health. The applicant can then be given a 'Likely ASH' Opinion.
4. If the applicant has MDR-TB or XDR-TB then the case requires an Opinion from a New Zealand based Respiratory Physician BEFORE providing the final MA Opinion. *(See the later section on how to do this).*

## **TEMPORARY VISAS: OFFSHORE**

### **NOT ASH – DANGER TO PUBLIC HEALTH**

---

Once an **OFFSHORE** applicant has been confirmed as having active TB:

1. The MA should record an audit item for Active TB.
2. The MA should ensure they have all the relevant information and request further information as needed, including:
  - a. Date and method of diagnosis;
  - b. Culture results including sensitivities;
  - c. Date treatment was commenced and length of treatment.
3. If the applicant has MDR-TB or XDR-TB then the case requires an Opinion from a New Zealand based Respiratory Physician BEFORE providing the final MA Opinion. *(See the later section on how to do this).*
4. Once all the relevant information is available, the MA should provide an Opinion:  
**NOT ASH – Likely to be a danger to New Zealand's public health**

## **TEMPORARY VISAS: ONSHORE**

### **NOT ASH WITH ETI – DANGER TO PUBLIC HEALTH**

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Once an **ONSHORE** applicant has been confirmed as having active TB:

1. The MA should record an audit item for Active TB.
2. The MA should ensure they have all the relevant information and request further information as needed, including:
  - a. Date and method of diagnosis;
  - b. Culture results including sensitivities;
  - c. Date treatment was commenced and length of treatment.
3. If the applicant has MDR-TB or XDR-TB then the case requires an Opinion from a New Zealand based Respiratory Physician BEFORE providing the final MA Opinion. *(See the later section on how to do this).*

4. Once all the relevant information is available, the MA should provide the following Opinion:  
**NOT ASH with an Exception to Instructions (ETI) being recommended.**  
**The recommended wording should be used (see below).**
5. The HAT Immigration Officer (HAT IO) will advise the Auckland based MOs/ BA that the assessing MA has finalised their Opinion. An email will be sent to Visa Services Operations Support, advising them that IHT would support an ETI to allow for completion of TB treatment onshore. Operations Support will then advise the Branch IO directly.
6. If the Branch IO accepts the ETI recommendation, the visa will be granted, for the recommended ETI period and will not return to the assessing MA for a 2<sup>nd</sup> Assessment.
7. However, if the Branch IO does not accept the ETI recommendation, the applicant will be asked to provide Disputing Information, and the case will be returned to the assessing MA for a 2<sup>nd</sup> Assessment. The assessing MA should then email the Auckland based MOs to inform them that the case has been returned with Disputing Information. The Auckland based MOs will then review the case and will advise the MA what to do regarding further management.

**NOT ASH with ETI wording:**

**NOT ASH Reason:** Like to be a danger to New Zealand's public health

The applicant has active TB and is currently undergoing treatment for this in New Zealand. This treatment is due to be completed on **XXXX** The applicant is Not ASH according to A4.25.1(h). An ETI is recommended, however, as in line with A4.15(b) the applicant is not infectious, is not imposing significant costs on New Zealand's health system and is able to undertake the study/work on the basis of which they are applying for a visa in line with. We would support INZ granting a visa for a period of 2 months after completion of treatment – until **XXXXX** to allow for completion of TB treatment onshore. The next visa application will require a copy of the final TB Chest Clinic letter. Please also provide a copy of the end of treatment Chest xray image performed by the Hospital (DICOM or JPEG format). Please note, a new Chest xray specifically for Immigration purposes does not need to be done. **Note : A CXR is only required for Pulmonary or Pleural TB, not extrapulmonary TB.**

## ‘NZ BASED’ RESPIRATORY OPINIONS FOR MDR OR XDR TB

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A New Zealand based Respiratory Specialist Opinion is **ALWAYS** required for any case where Multi Drug Resistant TB (MDR-TB) or Extremely Resistant TB (XDR-TB) is either proven, or suspected.

This is specifically required for Residence Visa applications (A4.10.1 of the Immigration Instructions)<sup>1</sup> but must also be applied to Temporary Visa applications.

***A4.10.1 Medical conditions deemed to impose significant costs and/or demands on New Zealand's health and/or education services***

- *Those with a history, diagnostic findings or treatment for MDR-TB or XDR-TB, unless they have been cleared by a New Zealand Respiratory or Infectious Diseases specialist upon review of their file and/or review of the applicant according to the New Zealand Guidelines for Tuberculosis Treatment”*

IHT reviewed the Immigration Instructions in December 2018, and as a result have determined that the New Zealand based Respiratory Specialist Opinion does not need to be specifically provided by the INZ RP.

- If the applicant has provided information from an ONSHORE Chest Clinic / Specialist, then there is no need to request an additional INZ RP Opinion.
- But if the applicant has provided information from an OFFSHORE Chest clinic / Specialist, then an INZ RP Opinion must still be requested.

The INZ RP is always able to provide an opinion for any case where the MA suspects, or cannot exclude active Tuberculosis and they have exhausted all other sources of advice such as chest clinic assessments or review of the case by the Auckland based MOs. This includes onshore active TB cases where the MA is not confident of the information being provided by the NZ Clinic / Specialist.

If you are simply uncertain about the appearances of a CXR – this should be discussed with one of the Auckland based MOs in the first instance. However, they may recommend you ask the INZ RP for their Opinion.

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<sup>1</sup> <http://onlineservices.immigration.govt.nz/opsmanual>



**ONSHORE Clinic Information:**

If the Chest Clinic information has been provided by an **ONSHORE New Zealand based Clinic / Specialist** and the letter states that the applicant is considered 'cured' of their MDR-TB or XDR-TB, there is no need to request an additional INZ RP Opinion unless you have concerns regarding the information provided by the NZ Clinic and you would like a second opinion from the INZ RP.

If the NZ Clinic letter has NOT stated that the applicant is considered 'cured', then you will need to request further information from that same Clinic / Specialist. This can be done using a new FIR: Chest Clinic for TB, and specifically asking the Specialist to answer the following questions:

- Has the applicant's treatment been completed?
- Are they considered 'cured' of their active TB?
- What ongoing management is required?
- What is their risk of recurrence?

Once the new information has been provided, the MA should then consider this and either request further information or provide an outcome.

**OFFSHORE Clinic Information:**

If the applicant has MDR-TB or XDR-TB and the Chest Clinic information has been provided by an **OFFSHORE Clinic / Specialist**, then the case **MUST** be referred to the INZ RP for their Opinion.

This referral should advise the INZ RP that the applicant has MDR-TB or XDR-TB. It should ask the INZ RP to review the case, including treatment details. And ask them to please provide an opinion as to whether the applicant's TB has been appropriately treated, or if further information is required to exclude ongoing Active TB. If further information is required – what investigations are recommended?

The MA should then consider the INZ RP's advice and either request further information or provide an outcome.

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## **PURPOSE OF THIS DOCUMENT**

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This document provides information to assist with testing for Non Tuberculous Mycobacterium (NTM) and identifying Non Tuberculous Mycobacterium Pulmonary Disease (NTM-PD), which is on the list of conditions in A4.1.10 of Immigration Instructions. It also offers guidance about requesting further information to assist in assessing the health of visa applicants with suspected NTM.

[A4.1 Acceptable standard of health \(applicants for residence\)](#)

## **BACKGROUND**

---

It is essential that visa applicants with active NTM-PD are identified. This disease is considered to be high cost due to:

- the type of treatments
- length of treatment usually required, and
- the high risk of active disease recurring.

Rates of NTM lung infection (colonisation and active disease) vary considerably between countries, but are generally considered to have been increasing in prevalence over the past 40 years. Recent studies in the UK have shown that around six per 100,000 sputum cultures are now positive for NTM.<sup>2</sup> A study in Canada has reported a prevalence of active NTM-PD of 41 per 100,000 cases.<sup>2</sup> This is thought to be secondary to increased:

- environmental exposure through home hot water systems
- long term antibiotic usage in inflammatory lung diseases
- use of medications which can impair immunity, and
- person-to-person transmission.<sup>2</sup>

## **ABOUT NTM**

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Non Tuberculous Mycobacterium (NTM), also known as Mycobacteria other than tuberculosis (MOTT) and Atypical Mycobacterium, are naturally occurring bacteria found in soil and water, including treated drinking water distributions systems. There are over 170 different known NTM species and more are constantly being discovered.

NTM bacteria are part of the Mycobacterium Genus (family), along with Mycobacterium Tuberculosis (M.TB) and Mycobacterium Leprae (Leprosy). However NTM is slightly different to TB and Leprosy, in that it does not always cause active disease and can simply be present as a colonising agent.

### **Risk factors for active NTM-PD**

Risk factors for active NTM-PD include:

- increased exposure – for example, swimming, gardening or bathing in hot tubs

- pre-existing lung disease such as asthma, COPD, Alpha-1 antitrypsin deficiency, Cystic Fibrosis, bronchiectasis or ABPA
- Lady Windermere Syndrome – white, postmenopausal, thin, tall, pectus excavatum and mitral valve prolapse
- other co-morbidities including GORD, Rheumatoid Arthritis, Vitamin D deficiency, low BMI and malnutrition
- immunodeficiency – inherited and acquired, in particular through HIV-AIDS
- immunosuppressive medications, including inhaled corticosteroids, transplant and chemotherapy medications
- use of azithromycin and PPI.

## **DIAGNOSIS OF NTM AND ACTIVE NTM-PD**

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It is essential to identify a false positive result for NTM indicating contamination, versus NTM colonisation, versus active NTM-PD.

Widespread exposure to NTM from the environment can contaminate sputum samples and create false positive results, for example through transient presence in the pharynx or upper airway at the time of sputum samples. In this scenario, a repeat sputum sample taken with appropriate technique should be negative.

NTM ‘colonisation’ is where NTM is identified as being chronically present in the lungs, but is not causing active pulmonary disease.

Active NTM disease can affect the lungs, sinuses, lymph nodes, joints and CNS, and also present as disseminated disease. NTM most commonly affects the lungs, causing progressive inflammatory lung damage – active NTM-PD.

Active NTM-PD can present as:

- a cavitating lesion that is:
  - often mistaken for M.TB or malignancy
  - most common in current or ex-smokers
  - often sputum smear positive
- a nodular-bronchiectatic abnormality – this is most common in women with no previous lung disease.

Some NTM species are known to be more likely to cause active NTM-PD, including:

- M. Avium Complex (MAC) (M.avium, M.intracellulare, M.chimaera subspecies)
- M. Kansaii
- M. Abscessus (including M.a.abscessus, M.a.massiliense, M.s.bolletti subspecies)
- M. Chelonae
- M. Fortuitum
- M. Malmoense
- M. Xenopi.

Other NTM species are rarely pathogenic and usually represent contamination of the sputum sample – for example *M. Gordonae*.

**Note**

Correct species identification of NTM isolates is clinically important since NTM species differ in their potential to cause clinical disease in humans and in their response to specific antibiotics. However, not all countries are able to undertake specific species testing in their laboratories.

**Recommended diagnostic criteria for NTM-PD**

Clinical, radiological and microbiological criteria need to be considered when diagnosing Active NTM Disease.

**Notes**

A single NTM isolate from sputum, which is not isolated again on repeated culture, is usually of no clinical relevance.

Individuals with two or more isolates of the same NTM species from repeated sputum cultures are more likely to develop radiological evidence of Active NTM-PD disease.

Clinical criteria

After other potential causes of symptoms are excluded, the symptoms will be:

- pulmonary, such as cough, sputum production, hemoptysis, chest pain or dyspnea, and/or
- systemic, such as fatigue, weight loss or fever.

Progressive symptoms increase the likelihood of NTM-PD, so that antimicrobial drug therapy may be necessary.

Radiological criteria

In a chest X-ray, nodular, ill-defined or cavitory opacities will be visible. In a chest CT scan there will be bronchiectasis with multiple small nodules, including:

- tree-in-bud or centri-lobular nodules
- lung cavitation, or
- air space disease (consolidation or ground glass opacification).

Microbiological criteria

Tests will show one of the following:

- positive culture results from at least two separate sputum samples
- positive culture results from at least one bronchial wash or lavage
- transbronchial or other lung biopsy
  - with mycobacterial histopathologic features (granulomatous inflammation or acid-fast bacilli (AFB)) and positive culture for NTM, or

- mycobacterial histopathologic features (granulomatous inflammation or AFB) and one or more sputum or bronchial washings that are culture positive for NTM.

## TREATMENT OF ACTIVE NTM-PD

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Antibiotic treatment requires multiple drugs and prolonged therapy (at least one year of treatment, but often two or more years of treatment) as well as careful monitoring of toxicity against the benefits. Treatment therefore usually requires close supervision by a respiratory specialist.

NTM-PD therapy is often not curative, with high recurrence rates and some individuals require ongoing, lifelong follow-up.

Infected individuals pose minimal risk to others and isolation precautions are not usually required. The exception would be if the person with active NTM-PD was in frequent contact with a person at high risk of infection – for example, a family member with cystic fibrosis.

## ASSESSING NTM FOR ASH REQUIREMENTS

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You need further information if an applicant's IME shows:

- cultures reported as positive for any species type of NTM
- a history of active NTM disease
- current active NTM disease, or
- any comments about suspected NTM disease.

### **Making further information requests (FIRs) to applicants with NTM or NTM-PD**

If there is any history, comment or a positive NTM sputum result from the IME make a FIR for:

- x3 new sputum samples for smears plus sample to be cultured over six to eight weeks – these are required for specific assessment of the applicant's positive NTM result
- the NTM species type, if it can be provided
- a new CXR and report.

Use the FIR heading, "Chest clinic for active TB" when requesting information about NTM. This allows you to report under a single FIR heading for a specialist review, sputum results and a new CXR image.

#### **Note**

There are many countries that are not able to test for the NTM species type. If the specialist's report states this cannot be provided, we must accept that.

### Outcomes following the initial FIR

- If the testing shows negative cultures, but your review of the chest X-ray shows more than minor abnormalities, refer to our INZ RP for an assessment.
- If the testing shows negative cultures and the CXR is stable then ASH for Residence and AWC for Temp (see below under ASH and AWC outcomes).
- If the testing shows positive cultures, even if the species is not able to be provided, refer to our INZ RP for an assessment and follow the RP's recommendation.
- If an applicant has Active NTM-PD the opinion from the RP may be **NOT ASH**.
- The opinion is particularly likely to be **NOT ASH** if the testing shows positive cultures for any of the following more serious pathogenic NTM species:

M. Avium Complex (MAC)

M. Kansaii

M. Celatum

M. Abscessus

M. Chelonae.

- If the species isn't provided, and if the RP assesses the applicant as having NTM, then your opinion would still likely be NOT ASH. In this case the applicant is assessed as likely NOT ASH because they are likely to impose significant costs or demands on health services. Please note: In your NOT ASH opinion, you can comment on further information that can be provided with a future visa application, including: information about the completion of their treatment for NTM along with updated Chest Clinic reports, and updated imaging (including CXRs and CT scans).

### ASH and AWC

The applicant meets ASH requirements for residence or AWC requirements for a temporary visa if:

- the testing shows negative cultures, and
- your review of their chest X-ray shows no, or only minor, abnormalities – a minor abnormality would be some linear opacities in one lobe of the lung, or
- an INZ RP decides that positive cultures showing up in the tests are likely to be a contaminant or a benign colonisation.

For an AWC outcome, please request a new CXR (to confirm stability of any previous minor abnormalities) and any updated Chest Clinic reports available.

### REFERENCES

[Best practices for Pulmonary Nontuberculous Mycobacteria, Public Health Ontario, June 2017.](#)

Haworth CS et al. [British Thoracic Society Guidelines for the management of Non Tuberculous Mycobacterial Pulmonary Disease \(NTM-PD\)](#). Thorax Vol 72, sup 2. Nov 2017.



## Renal Failure

### BACKGROUND INFORMATION

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It is important to note that renal failure / dialysis remains a high demand condition and one that we don't have enough resources for here in New Zealand and, on this basis, it is also a non waiverable condition.

Here is some previous work done by the Immigration Health team on costing dialysis.

**Hospital haemodialysis** – An estimated figure would be \$80,000 pa. (In 2002 - 4 the estimated cost was \$ 64,318 and in 2007 it was estimated to be around \$70,000. Australia estimated \$72,000 in 2012).

This cost would include equipment, consumables, and nursing staff time but would not include money spent by other departments like surgery for dialysis related procedures. The first year would carry a higher cost as this year would include other services and procedures e.g. radiology, surgery that are needed to get dialysis established.

**Peritoneal dialysis (PD)** – An estimate figure would be \$40,000 p.a. for continuous automated PD and about \$50,000 for automated PD (in 2002/3 the estimate was \$36,615).

This is primarily the cost of the fluids used. In the first year there is an additional cost of having the catheter inserted surgically and training the patient to do it which would add about \$10,000 to the cost of the first year. This does not take into account hospital admissions for complications like peritonitis which occur about once every 2 years and might mean needing to replace the catheter and a switch to haemodialysis for a few months which incurs additional cost.

**Home haemodialysis** – This is significantly cheaper in the longer term at about \$30,000 per year (in 2002 – 4 estimated to be \$33,584)

The cost is for consumables and depreciation on the dialysis machine. It is cheaper because there are fewer staff to pay. However, the first year is more expensive because they would need surgery to form vascular access (a fistula) and they need a period of training usually 3 – 6 months with a very high nursing input (usually 1:1 nursing), purchasing the machine and installing it in the home. So the first year of home HD would cost about \$50 – 60,000. Home dialysis is cheaper than PD after 3 years, once the costs associated with training and setup are 'paid off'.

1. What is the estimated actual annual cost to the public health system of providing XX with haemodialysis, taking into account her various medical conditions?





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From reviewing the bills that are available it appears that the applicant is consuming around \$12 – 13,000 per month in hospital costs. This is a higher cost than the expected \$8,000 per month and is likely due to the other health issues the individual has. Doctors I have spoken to have stated that there are other costs that should be anticipated. For example, most dialysis patients have other admissions to hospital for their heart disease, diabetes, etc. The public renal specialist who I contacted stated that 'if you are talking about the overall cost to the NZ taxpayer of having a person on dialysis because in reality very few dialysis patients hold down jobs and many will need assistance with other things like housing and transport also.' The data from Australia also indicates a stable cost model if the same treatment is maintained.

There are other options available to those that are New Zealanders including renal transplant. The operation costs about \$50,000, however, the workup and planning of a transplant is very expensive. I understand that a private hospital in Auckland charges around \$150,000 which includes all care leading up to the surgery as well. After the first year the ongoing cost is really just the cost of the drugs which is \$20,000 per year. While people are being worked up for kidney transplantation they are usually also receiving dialysis so the year of their transplant is very expensive but long term this is the most cost effective treatment and allows many to go back to work, etc.

So unless the type of dialysis is changed then it would be reasonable to assume that the current rate of consumption of public health care dollars would continue at around \$12 – 13,000 per month.

Ashton, T. & Marshall, M.R. 'The organization and financing of dialysis and kidney transplantation services in New Zealand' *Int J Health Care Finance Econ* (2007) 7: 233. doi:10.1007/s10754-007-9023-x

## RENAL ASSESSMENTS

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Renal related medical assessments can be very complicated, simply because of the unpredictable nature of renal disease / Chronic Kidney Disease (CKD) and the impact that a single acute renal insult can have on longstanding renal disease.

It is therefore not possible to determine a specific eGFR that should be of concern for all visa types. This will depend entirely on the medical scenario for each applicant. If you are unsure whether a specific applicant is likely to be of concern and needs further assessment, please contact the Medical Officers for advice. One tip is to check client history for any previous eGFR and past history.

An eGFR of <30 is always a significant concern and indicates that the applicant may need renal replacement therapy in the near future. A Nephrologist assessment should always be requested for these applicants.

## RENAL OUTCOMES

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### **Non Waiverable Condition: Dialysis**

- *The applicant requires dialysis treatment, or will require treatment within five years of the date of their medical assessment.*

An applicant who meets these criteria are NOT ASH for both GMC and LMC.

It is essential to determine if the applicant is likely to require renal replacement therapy (dialysis or transplant) in the future and if so, when. The Nephrologist proforma has good wording around this, or you can use your own. But it is important that this information is obtained when considering a NOT ASH outcome for renal abnormalities.

If it is not clear how the applicant's renal disease will progress, remember that you can Defer for Residence visas to allow for further assessment of renal function over time.

### **Renal Transplants:**

Renal Transplant is not technically a Non Waiverable condition in itself.

However, if the applicant needs dialysis while waiting for a transplant, then the applicant is Non Waiverable because of the dialysis and this should be clearly stated.

Renal Transplants are not always NOT ASH and the specific scenario needs to be considered for each applicant, including whether the applicant needs a transplant, or already has one.

**Residence: NOT ASH**

- A4.10.1 INZ Listed Condition: Requirement for organ transplants (with the exclusion of corneal grafts), or following organ transplant when immune suppression is required (with the exclusion of corneal grafts).
- If they are currently receiving or need dialysis, the MA should state: *Requiring / Receiving Dialysis is a Non Waiverable Condition.*

**Temporary:**

**Needs a renal transplant: NOT ASH**

- Likely to impose significant costs and demands.

**Has a renal transplant:**

- The outcome depends on the applicant's current health status and visa type:
  - Are they stable?
  - What medications are they on? What are the cost of these?
  - What ongoing assessments do they need and how often? What are the costs of these?
  - What is the visa length?
- An applicant may be NOT ASH or AWC depending on the answers to the above questions.

If you are not sure of an appropriate outcome for a renal condition, please contact the Medical Officers to discuss the case.

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## **PURPOSE OF THIS DOCUMENT**

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This document provides information about how to assess applicants for residence and temporary student visas who have special education needs. It offers guidance about how to request further information, get an assessment from the Ministry of Education and write ASH opinions. It also clarifies how children applying for visitor visas or providing Limited Medical Certificates (LMCs) can be assessed.

## **BACKGROUND**

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The Ongoing Resourcing Scheme (ORS) is funded by the Ministry of Education. The need for ORS funding is listed in A4.10.5 of Immigration Instructions as a condition likely to impose significant costs and demands on New Zealand's special education services.

Special education services include:

- Speech Language Therapy (SLT)
- Occupational Therapy (OT)
- Physiotherapy (PT)
- a teacher aide
- Resource Teachers of Learning and Behaviour (RTLBs), or
- assistive technology, such as a laptop with voice recognition software.

Depending on their physical, intellectual, sensory or behavioural condition, or group of conditions a student's requirements can range from very minor input such as simply needing SLT assistance to needing ORS funding.

### **Visa applicants who qualify for ORS funding**

Any applicant for a residence or temporary entry visa who may meet the criteria for ORS funding must be referred to the Ministry of Education for assessment before you give an opinion about their standard of health.

## **ABOUT ORS FUNDING**

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The ORS supports students with the highest level of need for special education so they can join in and learn alongside other students at school. To be accepted for funding they must meet Ministry of Education criteria. If they qualify for funding, it stays with them throughout their time at school up to the age of 21.

To meet ORS criteria, students must have:

- ongoing extreme or severe difficulty in any of the following areas – learning, hearing, vision, physical, or language use and social communication, or

- moderate to high difficulty with learning, combined with very high or high needs in any two of the following areas – hearing, vision, physical, or language use and social communication.

[Criteria and definitions for ORS – Ministry of Education](#)

Around 1% of students receive this support at any one time.

**What ORS funding offers**

ORS funds two levels of need: very high needs and high needs.

ORS provides services and support, including:

- specialists such as SLTs, psychologists, OTs, PTs, advisers on deaf children, special education advisors, orientation and mobility instructors among others
- additional or specialist teachers who coordinate the student's learning programme with the class teacher
- teacher aides to support the student's learning programme and include students in class programmes and activities, and
- consumables, such as computer software, extra-size pens and pen grips, Braille machine paper, laminating pouches, or CDs and DVDs.

[About ORS – Ministry of Education](#)

**ASSESSING SPECIAL EDUCATION NEEDS FOR ASH REQUIREMENTS**

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If student or resident visa applicants might meet the criteria for ORS funding, they must be referred to the Ministry of Education for an opinion from an ORS Assessor.

Request an ORS assessment if the applicant is of school age but under 21 years of age, and has:

- applied for a student visa or a resident visa
- a physical, intellectual, sensory or behavioural condition that indicates possible eligibility for ORS funding – this could include learning difficulties, special needs, developmental issues or delay, or low IQ.

You must also refer applicants who:

- already receive ORS funding
- have a condition you know qualifies for ORS funding
- are 4 years old and have a condition which may qualify for ORS funding.

**Before you request an ORS assessment**

Before you make a FIR to an ORS assessor, gather all the information relevant to the applicant's special education needs and any medical conditions they have.

If the case is referred to the Ministry without the necessary information, the ORS assessor may not be able to provide an opinion. This can slow down the visa application process and may cost the applicant more money if they need to get further information for a second assessment.

### **Assessing medical conditions for applicants with special education needs**

When an applicant has been assessed as being eligible for ORS funding, also consider:

- the nature of the applicant's medical condition
- their current level of daily functioning, and
- how they will manage in the future.

### **School-aged visitor visa applicants**

You cannot request an ORS assessment for school-aged children applying for a visitor visa even if it appears there is a possibility they may be eligible for ORS funding.

### **Applicants who provide Limited Medical Certificates (LMCs)**

Applicants who provide a Limited Medical Certificate (LMC) are subject to different criteria. However, if a child who has provided a LMC has any conditions which might qualify for ORS funding, request an ORS assessment.

### **Student visa applicants 21 years and older**

Students older than 21 cannot receive ORS funding. Assess these applicants under the medical visa requirements and not special educational or ORS criteria.

## **MAKING FURTHER INFORMATION REQUESTS (FIRS) TO APPLICANTS WITH SPECIAL EDUCATION NEEDS**

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Requesting supporting information from specialists

Depending on the special needs of the applicant you may need to make FIRs to:

- a developmental paediatrician, who can provide a medical opinion regarding any developmental disability, including physical, intellectual or cognitive disabilities
- an educational psychologist, who can provide an assessment of:
  - the applicant's overall intellectual and cognitive ability
  - their current developmental status
  - a prognosis of the conditions
- a SLT, who can assess any communication issues
- an OT, who can assess any difficulties with daily functions and physical limitations
- a physiotherapist, who can assess their physical limitations.

**Note**

It can sometimes be difficult to get specialist information for applicants living in some countries. For example, consider requesting a paediatrician assessment's rather than an assessment from an educational psychologist for an applicant living in countries with limited specialist resources.

It may be difficult to determine whether a young child could live independently in the future. If you are requesting a FIR from an educational psychologist or a paediatrician, ask them to comment on:

- whether the applicant currently requires a level of assistance with their ADLs that is significantly higher than other children of the same age
- how this is likely to change over time, and
- if, as an adult, they:
  - may be able to live independently, and
  - will need help with their ADLs.

Requesting information from a school

Always make a FIR for a letter from the applicant's school or preschool. Ask for details of:

- any educational supports they need or already receive
- how the applicant functions and participates while at school, and
- a copy of the applicant's most recent Individualised Education Plan (IEP).

**If an applicant disputes the Ministry of Education's ORS assessment**

If an applicant provides information to dispute the Ministry's opinion that they qualify for ORS funding, the new information must be referred back to the ORS assessor for a second opinion.

Your opinion is based on the new ORS assessment. If the applicant is applying for residence, also refer the medical information for a medical referee's opinion.

**ASH OUTCOMES FOR APPLICANTS WITH SPECIAL EDUCATION NEEDS**

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**Outcomes for residence and student visa applicants**

If an applicant meets ORS criteria and is applying for a resident visa or temporary student visa, the outcome will be likely NOT ASH.

If there is more than one reason that an applicant is likely to be NOT ASH then provide all the reasons for a NOT ASH outcome in your opinion. For example, children with medical conditions which have resulted in the need for special education services, may also impose a high cost on health services.



#### Applicants who qualify for ORS funding

If an applicant for a resident or student visa qualifies for ORS funding, use this wording to support your NOT ASH opinion.

Likely to impose significant costs or demands on New Zealand special education services.

Also include:

- all the relevant information about the medical condition that has resulted in the applicant being eligible for ORS funding and make it as detailed as possible
- confirmation from the ORS assessor that the applicant meets the criteria for ORS funding, or that the applicant already receives this
- any additional information provided by the ORS assessor, such as costs, and
- any information relating to a second assessment, including the information provided by the applicant to dispute the original Ministry of Education assessment.

#### Applicants who do not qualify for ORS funding

If an ORS assessment is returned advising that a student visa applicant is unlikely to be eligible for ORS funding, consider whether any of the applicant's conditions will impose significant costs or demands on our health services and, if not, whether an AWC outcome is appropriate.

If an ORS assessment is returned advising that a residence applicant is unlikely to be eligible for ORS funding, consider whether the applicant has any conditions on the A4.10.1 list of high-cost health conditions or has any conditions likely to cost more than the threshold of \$81,000 to manage. If so, detail these in your likely NOT ASH opinion.

#### **Outcomes for applicants providing LMCs**

If an applicant who provides an LMC has been assessed as eligible for ORS funding then comment on in your opinion. Refer to the Immigration New Zealand Guidelines for Medical Assessors for information on recording outcomes for LMCs.

#### **Outcomes for school-aged visitor visa applicants**

You cannot give an opinion of likely NOT ASH for a visitor visa applicant on the basis that they may qualify for ORS funding if an assessment was done. Instead, consider an AWC outcome. This means that your likely ASH opinion would only apply for the length of the visitor visa. In your opinion, specify the updated medical information they need to provide if they apply for another visa.

If you are proceeding with a likely NOT ASH opinion for a school-aged visitor visa applicant do not refer to any likelihood of costs or demands being imposed on special education services. In your opinion, include:



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- that they are likely to impose significant costs or demands on New Zealand health services, and
- provide details of the medical condition that means they are likely NOT ASH.

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## **PURPOSE OF THIS DOCUMENT**

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This document provides information about the testing and treatment for syphilis. It also offers guidance about requesting further information to assist in assessing whether an applicant meets ASH requirements.

## **BACKGROUND**

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Syphilis is a sexually transmitted disease (STD) caused by a bacterium called *Treponoma pallidum pallidum*. Infectious syphilis is a notifiable disease in New Zealand and its incidence has been increasing since 2000. Long-term untreated syphilis can be very serious, permanently debilitating and sometimes fatal.

If an applicant has a reactive test result for syphilis, you must get confirmation of the diagnosis and confirm that the applicant has been treated appropriately – for example, with weekly doses of penicillin for three weeks.

## **ABOUT SYPHILIS**

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Syphilis has three clinical stages plus a latent phase. Around 50% of people will have no symptoms and are diagnosed on serologic tests. For visa applicants this often occurs when they do an IME.

### **Primary syphilis**

The incubation period for primary syphilis is 10 to 90 days, with an average of 21 days. The most common presentation is a painless genital ulcer which often heals within a few weeks, even if it is not treated.

### **Secondary syphilis**

The incubation period for secondary syphilis is 2 to 24 weeks, with an average of 6 weeks. This may present with symptoms such as fever, malaise, headache and lymphadenopathy. More than 90% of cases develop a rash. Alopecia and condylomata lata are also common symptoms. All symptoms resolve slowly over some weeks, even if they are not treated.

### **Tertiary syphilis**

Tertiary syphilis develops in about one third of untreated syphilis infections. It can occur months or years after the syphilis infection was first acquired and can be fatal. Tertiary syphilis can affect multiple organ systems including the brain, nerves, eyes, heart, blood vessels, liver, bones and joints. The symptoms of tertiary syphilis vary depending on the organ system affected.

### **Latent syphilis**

The latent (hidden) stage of syphilis is a period of time when there are no visible signs or symptoms of syphilis infection. If untreated, all people become asymptomatic over a period of 12 to 24 months after infection. After 24 months people are no longer infectious, but the infection can be passed on to an unborn foetus.

There are two types of latent syphilis:

- Early latent syphilis is where infection occurred within the past 24 months.
- Late latent syphilis is where infection occurred more than 24 months ago.

### **DIAGNOSIS OF SYPHILIS**

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Syphilis can only be diagnosed through a range of tests, some of which need to be repeated to confirm a positive diagnosis. Appendix 1, Algorithm for syphilis screening and confirmatory testing, shows the sequence of testing for determining an infection.

Syphilis serology can be difficult to interpret. It can take up to 90 days for a test to become positive after infection and some serological tests remain reactive for life, even after successful treatment.

Auckland Sexual Health Service recommends that all positive syphilis serology tests should be discussed with a sexual health specialist.

Follow-up testing to monitor non-treponemal test titres (PRP/VDRL) is important to establish that a cure has been effective.

#### **Non-treponemal tests**

VDRL, RPR and EIA tests are all considered to be non-treponemal tests (or non-specific) for syphilis. They are widely available, rapid and relatively inexpensive. The VDRL and RPR tests can also be used for quantitative evaluations – looking at the change in titre dilution over time, where falling titres may indicate successful treatment or where a four-fold rise in titres is indicative of reinfection.

The limitations with all these tests, if used on their own, are:

- They lack sensitivity with late latent or late active syphilis.
- Between 1% and 2% of patients with secondary syphilis will have false negative results.
- Some antibodies other than treponemal antibodies cause biological false positive reactions.

### **Treponemal tests**

Because of the limitations of the non-treponemal tests there are also more specific treponemal tests – for example, TPHA or TPPA tests or treponemal antibody EIA tests.

The TPHA test is highly sensitive in all stages of the disease except possibly in early primary syphilis.

### **Other tests**

IgM capture EIA tests are mainly used to diagnose congenital syphilis, or for differentiating past infection from current or recent infection. These are also useful for detecting early syphilis infection.

### **False positive reactions**

All of the available serological tests may produce false positive reactions, especially in low prevalence populations. Many medical conditions including acute and chronic viral infections, pregnancy, malignancy and auto-immune disorders can give rise to false positive results.

However, when two or three different serological tests are positive (EIA, RPR, TPPA) the patient is highly likely to have either a current or past infection with syphilis.

## **TREATMENT OF SYPHILIS**

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The Aotearoa New Zealand STI Management Guidelines for use in Primary Care recommend that treatment should be given by, or after discussion with, a sexual health specialist. The guidelines include testing and treatment options.

[STI Management Guidelines – syphilis](#)

## **ASSESSING SYPHILIS FOR ASH REQUIREMENTS**

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### **Making further information requests (FIRs) to applicants with syphilis**

If there is evidence of syphilis infection and a false positive result has been excluded, then make a FIR for an assessment by a sexual health specialist.

### **Wording FIRs for applicants with syphilis**

Use or modify this wording to create a FIR.

A report from an infectious disease or sexual health specialist is required regarding the applicant's syphilis test results. This should include: history, diagnosis, clinical



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examination findings, the results of any additional investigations performed, management needs and long-term prognosis.

If the applicant is being treated for syphilis, provide details of the medication used including the drug names, dose and dates administered.

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## **PURPOSE OF THIS DOCUMENT**

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This document provides guidance about urinalysis results and how to interpret them when assessing a visa applicant's standard of health.

## **ASSESSING URINALYSIS FOR ASH REQUIREMENTS**

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Use this general advice to help your assessment, but consider each applicant's results in relation to their other medical information and conditions.

If the laboratory report shows abnormalities, check the dates of the tests. If they were all done on the same day and you believe the abnormality to be significant, consider making a FIR depending on what the abnormalities show.

Abnormalities include:

- glucosuria
- haematuria
- proteinuria, and
- haematuria and proteinuria.

### **Making further information requests (FIRs) to applicants with abnormal urinalysis results**

#### Haematuria

If the result raises concern – for example, the applicant has persistent haematuria, and is older or male – consider making a FIR for another urinalysis.

If the result remains positive for haematuria then, depending on the applicant and the specific scenario, consider making a FIR for a renal tract ultrasound or a urologist's assessment.

#### Proteinuria

If there is a good reason for the proteinuria – for example, the applicant has known diabetes or hypertension – then it may be useful to determine the degree of proteinuria as part of any FIRs you make. For diabetics make a FIR for the microalbumin:creatinine ratio, also known as ACR or MAU.

For non-diabetics make a FIR for the protein:creatinine ratio, also known as PCR.

#### Haematuria and proteinuria

Because of their ethnicity, many visa applicants are high risk for renal conditions such as IgA Nephropathies. If an applicant has haematuria and proteinuria investigate further by making a FIR for a nephrologist's assessment.

## **ASH OUTCOMES FOR APPLICANTS WITH ABNORMAL URINALYSIS RESULTS**

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If an applicant has one abnormal dipstick urinalysis result, and the second is normal, then your opinion can be likely ASH.

If the applicant has two abnormal dipstick urinalysis results, check if the Panel Physician has provided a formal laboratory report. If this is normal, then your opinion can be likely ASH.

### **Glucosuria**

Glucosuria is not significant in itself and does not need follow up if there is a good reason for its presence – for example, if the applicant has uncontrolled diabetes. The diabetes is significant however and is likely to result in an opinion of NOT ASH or AWC. Make a FIR for an endocrinologist's report including HbA1c+/- to help you form an opinion.

If there is no obvious reason for the glucosuria and the applicant is otherwise well, with no other medical conditions, consider an opinion of AWC. When the applicant next applies for a visa they need to provide a new urinalysis, HBA1c and a medication list.

### **Haematuria**

If the Panel Physician has provided a good reason for the haematuria result and the applicant is low risk with no other medical concerns, consider an opinion of likely ASH or AWC.

If there is no obvious reason for the haematuria and the applicant is otherwise well, with no other medical conditions, consider an opinion of AWC. When the applicant next applies for a visa they need to provide a new urinalysis, HBA1c and a medication list.

### **Proteinuria**

If the applicant has proteinuria, but normal Creatinine, eGFR and no known medical condition or other abnormality on their medical assessment, consider an opinion of likely ASH or AWC.

### **Haematuria and proteinuria**

If the applicant has haematuria and proteinuria, and no known medical condition or other abnormality on their medical assessment, consider an opinion of likely ASH or AWC.