

# Considered Judgement Form

*This form is a checklist of issues that may be considered by the Purchasing Guidance Advisory Group when making purchasing recommendations.*

**Meeting date:** 14 August 2007

**Topic:** Evidence based review - Bioptron light therapy

## **Background and purpose:**

The Evidence Based Healthcare (EBH) group has been asked to assess the effectiveness of Bioptron light therapy, a non-invasive treatment based on the premise that light with particular characteristics can reduce inflammation and promote healing of skin and soft tissue. ACC has been approached a number of times to fund the purchase of Bioptron devices for home use by claimants with wounds, ulcers and sports injuries.

The evidence based review produced by the EBH team has been peer reviewed by a reconstructive plastic surgeon who felt that it was a fair and accurate analysis of the available research literature.

## **1. Effectiveness, Volume of Evidence, Applicability /Generalisability and Consistency**

Comment here on the extent to which the service/product/ procedure achieves the desired outcomes. Specific reference needs to be made to safety. Report number needed to treat and harm where possible, any issues concerning the quantity of evidence and its methodological quality and the extent to which the evidence is directly applicable or generalisable to the New Zealand Population, and the degree of consistency demonstrated by the available evidence. Where there are conflicting results, indicate how the group formed a judgement as to the overall direction of the evidence

The review identified ten studies on Bioptron light therapy. The studies dealt with burns, carpal tunnel syndrome, epicondylitis (2), post-surgical healing (3) and ulcers (3). Four were case series, three were controlled but not randomised and three were randomised controlled trials. The studies tended to be of low methodological quality and overall the evidence for the effectiveness of Bioptron light therapy was weak. The evidence was slightly stronger in the case of venous ulcers and skin graft donor site wounds. The included studies reported no adverse effects or safety issues.

## **2. Cost**

Comment on any economic costs associated with this service, product or procedure

The cost of Bioptron equipment for home use ranges from \$860 for a basic device to around \$1500 for a device plus light filters to deliver "colour therapy".

## **3. Clinical impact**

Comment on the clinical impact e.g. size of population, magnitude of effect, relative benefit over other management options, resource implications, balance of risk and benefit.

Bioptron is a non-invasive therapy for which there has been a small but persistent demand for ACC funding. Most of the requests to date have been for claimants with chronic soft tissue injuries (e.g. persistent venous ulcers) who have had limited success with other treatment options.

#### 4. Equity, Maori Health, Pacific Health, Acceptability

Comment on the extent to which the service, product or procedure reduces disparities in health status (equity of access, resources, health outcome), is consistent with the treaty of Waitangi and encourages Maori/ Pacific participation in providing and using service, product and procedures, and is consistent with values and expectations of New Zealanders.

No issues identified.

#### 5. Possible Purchasing Options

List the possible purchasing options.

- 1. Bioptron light therapy may be considered on a case by case basis as an adjunctive treatment for venous ulcers and skin graft donor site wounds in a hospital setting.***
- 2. Do not purchase in a hospital setting at this stage; the decision will be reviewed when new evidence becomes available.***
- 3. Do not purchase as a self-administered home treatment.***

#### 6. Evidence Statement

Summarise the advisory group's synthesis of evidence relating to this service, product or procedure, taking the above factors into account, and indicate the evidence level that applies.

***The available research is of low quality and does not provide strong evidence with which to assess the clinical effectiveness of Bioptron light therapy. The evidence of effectiveness is slightly stronger in the case of venous ulcers and skin graft donor site wounds.***

#### 7. Purchasing Recommendations

What recommendation(s) does the advisory group draw from this evidence?

***Do not purchase Bioptron light therapy in either the hospital setting or as a self-administered home treatment at this stage. The decision will be reviewed when new evidence becomes available.***