**Health Literacy and Chronic Hepatitis B:**

**Using teach­back to improve patient understanding.**

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Title of study:

Health Literacy and Chronic Hepatitis B: Using teach­back to improve patient understanding.

**Background:**

Chronic Hepatitis B (CHB) infection is a great public heath burden in Australia with its most concerning complication of liver cancer becoming one of the fastest growing cause of cancer-related deaths (MacLachlan et al 2012). Approximately two thirds of the patient population with CHB in Australia are from marginalised communities including migrants from endemic regions and Aboriginal and Torres Strait Islander peoples (MacLachlan et al 2011). Studies conducted to assess health literacy and patient understanding amongst patients with CHB have revealed gaps in patient knowledge of the disease (Dahl et al 2014; Hajarizadeh et al 2015) with one study conducted amongst patients with CHB in Torres Strait regions of Australia showing lower understanding of Hepatitis B (HepB), its complications and protective health measures to mitigate long-term consequences of poorly managed disease (Preston-Thomas et al 2013).

 Limited health literacy has great impact on patient health outcomes; poorer knowledge of disease is linked with suboptimal self¬care, reduced treatment adherence and increased use of emergency services (Berkman et al 2011). The current literature suggests medical information is often very poorly and inaccurately recalled, with up to 40¬80% of information forgotten almost immediately (Kessels 2003). One of the most effectively implemented intervention to address poor retention and understanding is the use of ‘teach-back’ (Nouri & Rudd 2015). Teach back is an education strategy,y part of the Health Literacy Universal Precautions Toolkit, which involves asking patients to recall and to explain in their own words their understanding of the information given. By repeating small sequences of information, this strategy has been demonstrated to heighten recall (Kandula et al 2011). Currently, there is a small evidence base for the successful use of teach-back (Griffey et al 2015; Negarandeh et al 2013; Wilson et al 2012; Schillinger et al 2003), however as of date there have been no studies conducted to assess the effect of teach-back on patient understanding in the CHB setting.

In this project we will evaluate patient knowledge of transmission and consequences of chronic hepatitis B among these CHB patients attending the clinic. We test the effectiveness of “teach-back” by comparing knowledge before and after a dedicated teach-back education session. We will compare the improvement in knowledge pre-/post- the teach-back education session with the improvement in knowledge pre-/post- a standard clinical consultation.

**Hypotheses:**

1. Patient knowledge of transmission and consequences of chronic hepatitis B is poor.
2. The use of the teach-back communication method will improve patients’ understanding of chronic hepatitis B compared to the standard outpatient consultation

**Study Aims**:

The primary aim of this study is to evaluate the efficacy of the teach-back communication method for improving participants’ understanding of chronic hepatitis B, compared to a standard clinical consultation.

The secondary aims are to i) compare efficacy in participants who are English-speaking vs. non-English speaking; and ii) compare efficacy of teach-back communication vs. a standard clinical consultation.

**Population**:

The study population will consist of a representative group of adults who are chronically infected with HBV. Participants will be recruited from the outpatient clinics at St Vincent’s Hospital Melbourne.

**Study design:**

Participants will be randomized into the standard consult or teach­back group. A pre­questionnaire will be administered to all participants to collect information on demographics and to assess the baseline knowledge of four domains of HBV: transmission, complications, treatment and management (Appendix 1).

Participants will then attend their allocated standard outpatient consultation or teach­back session. The teach­back session is a one­on­one discussion between the investigator and the participant on agreed upon concepts of HBV. The investigator will be following a standardized script and reassessing comprehension until the patient has understood the information. A post­questionnaire will be administered to participants following their respective consultation to re­evaluate HBV understanding (Appendix 1). The questionnaires assessing understanding will be in a multiple­choice format. Participants will be invited to participate in a second evaluation 4 weeks after the initial educational intervention (teach-back vs. standard clinical consultation). The same questionnaire will be administered (Appendix 1).

In this pilot study, we will aim to recruit up to 100 participants. We will aim to recruit up to 50 subjects English-speaking as a first language, and up to 50 subjects non-English speaking subjects. For non-English speaking participants, we will use interpreters for delivery of teach-back and to administer questionnaires.

**Inclusion/Exclusion criteria:**

Subjects will be eligible if they meet the following inclusion criteria:

1. Male or female, at least 18 years of age.
2. Chronically infected with HBV, defined by HBsAg-positive for > 6 months.
3. Compensated liver disease.
4. Willing and able to participate in a questionnaire

Subjects will be excluded from the study for the following criteria:

1. Decompensated liver disease
2. Unwilling / unable to participate in a questionnaire

Withdrawal criteria:

1. Patient withdraws consent

**Data analysis**:

All analyses will be performed on an intent‐to‐treat basis, and include all enrolled patients receiving at least one dose of therapy. Due to the exploratory and qualitative nature of the study, formal statistical tests will not be applied to the data, and formal power calculations are not possible. For continuous data, summary statistics will include means, standard deviations, medians, 25% percentile, 75% percentile, minimum and maximum will be calculated. For categorical data statistical summaries will include counts and percentages (proportions) of subjects with a positive response.

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