The Headache-Attributed Lost Time (HALT) Indices: measures of burden for headache management in primary care

Assessment of a headache disorder requires more than diagnosis: there needs to be some **measure of impact** on the patient's life and lifestyle, both as a prelude to planning best management and to establish the baseline against which to evaluate treatment.

The burden attributable to headache disorders has multiple components: there are many ways in which recurrent or persistent headache can damage life. No simple measure can summarise them all in a single index. The concept behind HALT is estimation of **productive time lost** through the disabling effect of headache; the result is expressed by a number with intuitively meaningful units (*eg*, days/month). Because productive time is an important casualty of headache, its measurement is highly relevant to burden assessment.

HALT has five questions.

Questions 1 and 2 ask about *absenteeism* due to headache, and reduced productivity whilst at work despite headache (*presenteeism*). "Work" in this context may be as a paid employee or in self-employment. For children it includes schoolwork. To estimate total lost productive time from work, days wholly lost through absenteeism are added to days of presenteeism with less than 50% productivity; by way of counterbalance, headache-affected days are ignored in which productivity was nevertheless more than 50%.

Questions 3 and 4 address household work in the same manner. "Household work" refers to the range of chores necessary in daily home living; while the nature of these may to an extent be gender-related, "household work" is not intended only to encompass work that tends, in many cultures, to be left to women.

An instruction is given to avoid double-counting (on a single day, productivity both at work and in the performance of housework may suffer reductions of more than 50%).

Question 5 relates to days on which social occasions are missed because of headache.

Two versions of HALT are useful in headache management, while serving different purposes. **HALT-90** counts days affected by headache during the preceding three months (90 days). In the initial assessment of a patient, this best balances two conflicting demands: the need to reflect a patient's illness over a representative period against the problems of recall error when that period is prolonged. During follow-up, the purpose of assessment shifts towards measurement of change attributable to treatment. Measures reflecting shorter periods than three months serve this purpose better: **HALT-30** accordingly records days affected during the preceding one month (30 days).

Scoring HALT

HALT (30 or 90) can generate **three summed scores** from the first four questions, the unit of each being whole days per one or three months:

a) lost (paid) work time;
b) lost household work time;
c) total lost productive time – the sum of (a) and (b).

Question 5, however, gives rise to a simple count for which the unit is not whole days, and an error is introduced when this count is added to any of these scores. Furthermore, including question 5 in a summation of responses further invites double counting when a day lost at work is followed by a missed social event during the evening of the same day. Nevertheless, the count of lost social events *does* reflect additional burden, so question 5 is retained in HALT-90 and included in the **total summed score** (sum of all five questions), which gives rise to **grading** (see Table).

Table. Grading of HALT-90

Days lost in last 3 months	**Assessed impact**	**Grade** (indicating increasing need for medical care)
0-5	minimal or infrequent	I
6-10	mild or infrequent	II
11-20	moderate	III (indicates high need for care)
≥20	severe	IV (indicates high need for care)

Grading has value in indicating the level of a patient's personal need and, perhaps, priority for treatment. But for assessment as a prelude to planning management, or for establishing the baseline impact, the individual summed scores are more informative than overall grades. Grading is not used by HALT-30.

The Headache Under-Response to Treatment (HURT) questionnaire: a guide to follow-up in primary care

Whenever treatment of a patient is started, or changed, **follow-up** either ensures that optimum treatment has been established or recognises that it has not. In the latter case, it should then identify any further change(s) to treatment that may be needed.

Resources, services and expectations vary greatly between countries and cultures. Even in optimal circumstances, outcomes are rarely perfect. It is not always easy to know whether or not the outcome that has been achieved by an individual patient is the best that the patient can reasonably expect. For the non-specialist, one question that sometimes arises is: "What further effort, in hope of a better outcome, is justified?" A second question, which follows if it is thought that more should be done, may be "What is it that needs changing?"

Lifting The Burden developed the **HURT questionnaire** as an instrument that would not only assess outcome but also provide answers to these two questions, offering guidance to non-specialists on appropriate actions towards treatment optimisation.

HURT is an 8-item self-administered questionnaire: therefore, it is quick and easy to use in primary care.

It addresses headache frequency, disability, medication use and effect, patients' perceptions of headache "control" and their understanding of their diagnosis. Responses are either numerated in days over a one- or three-month recall-period or selected from Likert options. In either case, responses either fall into an area of "no concern" or are graded into one of three flagged areas indicating increasingly important treatment deficiencies; clinical advice is provided for each of latter.

HURT has undergone psychometric validation and clinical testing in various settings and cultures.