IVR - Medical Results of an Integrated Health Care Concept for (Low) Back Pain Patients

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ABSTRACT (UPDATED)

BACKGROUND/RATIONALE:

Patients suffering from chronic (low) back pain [(L)BP] are responsible for the vast majority of (L)BP-related costs in industrialized countries worldwide. Despite enormous efforts, the usual medical care approaches for this patient group failed. Research identified unimodal, primarily procedural driven interventions as main cause for this dilemma and claimed multimodal performance-/outcome-focused treatment/reimbursement approaches to improve this situation.

METHODS:

Since 2007, IVR – an integrated health care project established by the Integrated Managed Care (IMC) Company in corporation with the German Pain Association and the Techniker Krankenkasse (TK, one of the largest national compulsory health insurances in Germany) offers (L)BP patients with a sick leave duration of ≥28 days a multimodal treatment concept specifically tailored to meet their very unique healthcare needs. Patient allocation is conducted by specialized case managers of the TK. Reimbursement based on a bonus/malus system and incorporates treatment duration as well as distinct treatment effect parameters (primarily the back to work rate - BTWR).

RESULTS:

Until August 20th, 2010, 3.268 (L)BP patients were allocated. 2.237 patients (age: 45.1±9.6 yrs., 54.5% male, sick leave duration: 91.1±119.6 days) – most of them suffering from chronic (MPSS stage II/III: 80.2%) and dysfunctional pain (v. Korff grade III/IV: 83.4%) – participated and entered the multimodal tailored treatment period. Within 4-8 weeks, 1.892 patients (84.6%) returned back to work and 84.1% remained there without any recurrence for at least 6 months. Responder pain intensity (PI) scores at baseline, week 4, week 8 and month 6 (mm VAS) were as follows: lowest PI: 41.2±16.9, 26.0±14.9, 21.1±12.3, 15.8±10.6; average PI: 58.9±19.7, 41.3±19.5, 38.2±19.2, 30.4±15.9; highest PI: 78.9±18.1, 62.7±20.2, 54.5±20.6, 46.1±21.3. Number of patients with significant (L)BP-related disabilities in daily life activities changed from 44.3% at baseline over 23.5/18.5% after weeks 4/8 to 11.1% after 6 months, paralleled by significant changes in pain-related depression (33.4 vs. 6.2%) and anxiety (29.8 vs. 9.8%), restrictions of overall well-being (71.7 vs. 21.7%) and quality-of-life (58.6 vs. 12.0%).

CONCLUSION:

A highly individualized multimodal treatment concept in combination with a merit-rating (bonus/malus) reimbursement proves highly efficacious with respect to the BTWR of chronic (L)BP patients.

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FIGURE 1

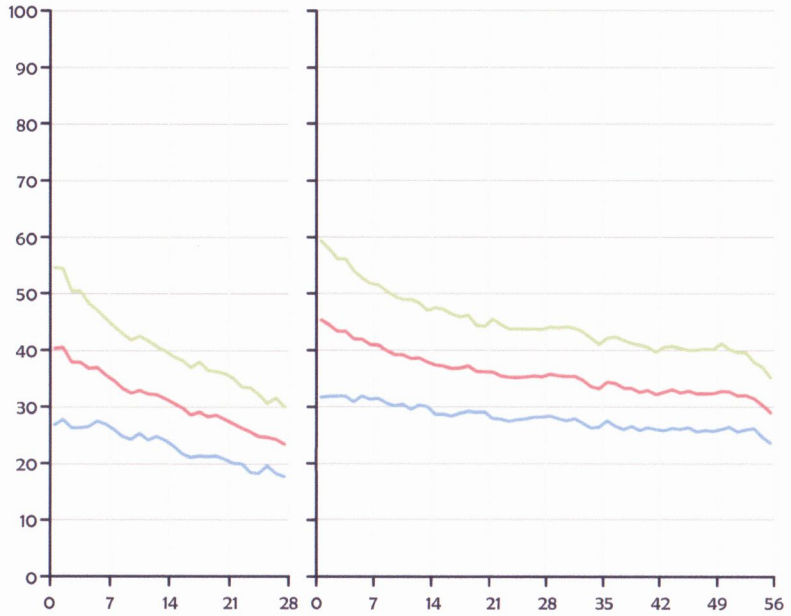

FIGURE 2

Figure 1 and 2 show treatment-related changes of the lowest (blue), average (red) and highest (green) pain intensities as assessed in the pain diaries of (L9BP patients showing a complete response (i.e. a 100% back to work rate) after 4 (Fig. 1) or 8 weeks (Fig. 2).

FIGURE 3 (von Korff grading)

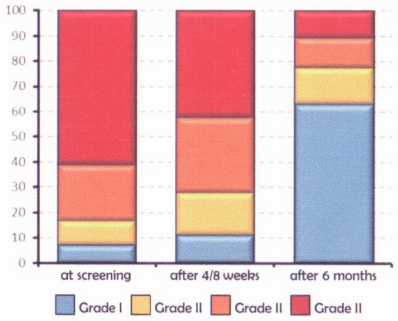

FIGURE 4 (modified pain disability index, mPDI)

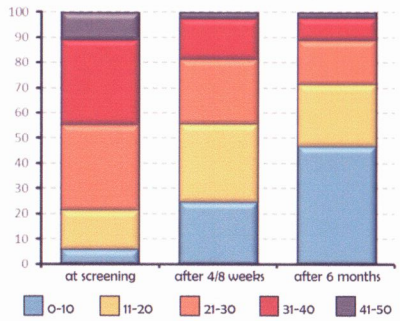

FIGURE 5 (depression, HADS-D)

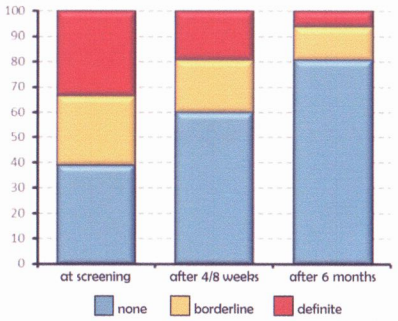

FIGURE 6 (anxiety, HADS-D)

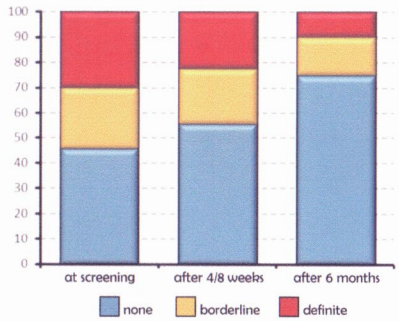

FIGURE 7 (quality-of-life Impairment by pain, QLIP)

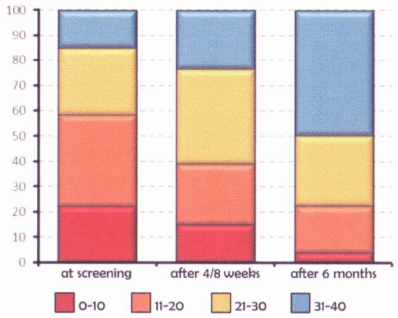

FIGURE 8 (overall wellbeing, MFHW)

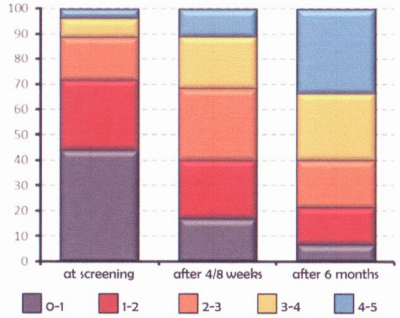

FIGURE 9 (fear avoidance beliefs, FABQ)

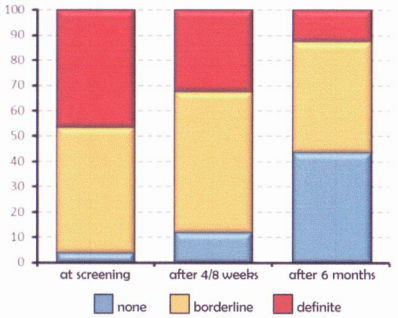

FIGURE 10 (functional capability, FFbHR)

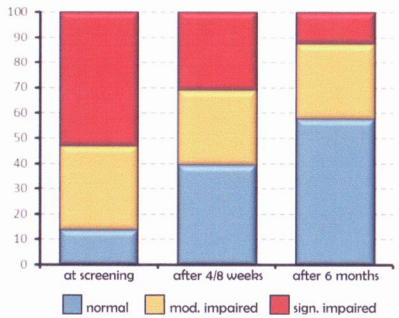

Figure 3-10 give an overview over the IVR-related changes in different (L)BP-related aspects between baseline, the end of the active treatment course (after 4/8 weeks) and follow-up (6 months after completion of the IVR program): functional (1-2)/dysfunctional (3-4) pain grading by v. Korff (Fig. 3), degree of pain-related restrictions in daily life as assessed with the modified pain disability index (mPDI; Fig. 4), depression and anxiety as assessed with the Hospital Anxiety and Depression Scale (HADS-D, Fig. 5 & 6), the pain-related restriction of the quality-of-life as assessed with the Quality-of-Life Impairment by Pain inventory (QLIP, Fig. 7), the overall wellbeing as assessed with the German "Marburger Fragebogen zum habituellen Wohlbefinden" (MFHW, Fig. 8), fear avoidance beliefs as assessed with the Fear Avoidance Beliefs Questionnaire (FABQ, Fig. 9), and the functional capability as assessed with the German "Hannoveraner Funktionsfragebogen Rückenschmerz" (FFbHR, Fig. 10).