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Web 2.0 Diabetes Portal Enhances Patient Information Retrieval and Disease Management

Forum should be open and providers should log in frequently

According to a study published recently in the *Journal of Medical Internet Research*, Web 2.0 portals have great potential for supporting patients, both young and old. Clinical practitioners should be educated further on the use of these helpful interactive web tools.

Web 2.0 allows users to develop and manage content, which is a big step from the earlier Web 1.0. Healthcare organizations such as the World Health Assembly have encouraged the use of Web 2.0 in developing interventions for vulnerable groups. Prior research suggested that children with diabetes needed better patient information and access to services; and that adults with the condition who interacted with Internet-based interventions had improved health, education, and

quality of care. The authors of the current study were interested in this population and thus sought to assess patient and parent attitudes toward a local Swedish portal tailored to those with type 1 diabetes.

The portal, called Diabit, was developed over several years based on input from both pa-

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tients and healthcare professionals. Launched in the spring of 2006, it contained diabetes-related information including educational videos and extensive text pages as well as social networking functions like message boards and blogs. Diabit was targeted toward both adolescents and parents. For patients younger than age 12 years, the portal was targeted at parents. A total of 16 mothers, 3 fathers, and 5 young patients (ages 11 to 18 years) completed an essay on their

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experiences using the portal over a period of about 2 years. They were asked two main questions, about their subjective successes and failures using the site, and their responses were coded using qualitative content analysis.

The authors found that participant attitudes toward Diabit could be categorized into three main groups: the management tool, the generator, and the gatekeeper. As a disease management tool, respondents said they were able to search for and find information relevant to them and that they trusted the information they found. They especially valued being able to find answers to difficult questions focusing on sensitive areas, such as anxiety and fear. As a generator, they valued the ability for the portal to generate more information than expected as well as their own ability to share information that

was mediated by other users. The respondents also viewed the portal as a gatekeeper, which to them was negative. They expressed difficulty logging in and following password procedures.

Overall, the test group found Diabit to be very informative and helpful. They suggested having a more open forum to reduce password issues and the feeling of stigmatization; they also suggested having providers log in frequently to update information and show that they are invested in the patient's progress.

Source: Nordfeldt S, Hanberger L, Bertero C. 2010. Patient and parent views on a Web 2.0 diabetes portal – the management tool, the generator, and the gatekeeper: qualitative study. *Journal of Medical Internet Research* 12(2):e17.

Kyphoplasty Bests Conservative Treatment After 3 Years

Improvements seen in pain, mobility, and new fracture risk

Kyphoplasty reduced pain and improved mobility for up to 3 years after the procedure, a study published recently in the *Journal of Vascular and Interventional Radiology* found. Compared to controls, the procedure also reduced the long-term risk of new vertebral fractures.

The authors note that kyphoplasty provides immediate improvement in pain and mobility to patients with osteoporotic vertebral fractures. The long-term clinical benefits of the procedure remain controversial, however, because long-term outcome studies are as yet unavailable. In addition, long-term negative effects with regard to follow-up fractures, particularly of those in adjacent vertebral bodies, have yet to be determined. With this in mind, the authors evaluated patients up to 3 years after kyphoplasty and assessed morphologic and clinical parameters and the occurrence of

new vertebral fractures.

The authors enrolled 60 patients with primary osteoporosis and painful osteoporotic vertebral fractures older than 12 months. All patients had chronic back pain lasting more than 1 year. Kyphoplasty was performed in 40 patients, and 20 patients who were selected for kyphoplasty

but chose not to undergo the procedure served as controls. All patients received pharmacologic anti-osteoporosis treatment, pain medication, and physiotherapy.

The present study supports kyphoplasty in patients with painful vertebral fractures resulting from primary osteoporosis as a beneficial part of pain management.

All patients were examined in follow-up visits 1 and 3 years post-procedure, with kyphoplasty patients receiving an additional follow-up examination immediately post-procedure. Follow-up visits included assessment of back pain, mobility, radiomorphologic parameters, and new vertebral fractures. Back pain was assessed using the visual analog scale (VAS) (0 to 100 with

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0 indicating no pain) and mobility was assessed via the European Vertebral Osteoporosis Study (EVOS) questionnaire (scale of 0 to 100 with 100 indicating no impairment).

Patients in the control group saw the mean VAS score change from 66.4 at baseline to 65.7 after 12 months, and 64.0 after 36 months. In the kyphoplasty group, pain scores improved from 73.8 at baseline to 55.9 immediately after kyphoplasty, to 55.6 after 12 months, and 54.0 after 36 months. The mean EVOS mobility score among controls improved from 39.8 at baseline to 44.3 after 12 months, and 43.6 after 36 months. Kyphoplasty patients improved from 43.8 at baseline to 54.2 immediately after the procedure, to 54.5 after 12 months, and 54.8 after 36 months. The incidence of new vertebral fractures after kyphoplasty was significantly reduced versus controls after 36 months. In the control group, there was a significant loss of mean midline vertebral body height of the vertebrae initially planned for kyphoplasty from 60.9 percent at baseline, to 55.8 percent at 12 months, and

51.2 percent at 36 months. In the kyphoplasty group, midline vertebral body height of the treated vertebral bodies was 59.2 percent at baseline, 68.3 percent immediately post-procedure, 66.7 percent after 12 months, and 64.7 percent after 36 months.

“The present study supports kyphoplasty in patients with painful vertebral fractures resulting from primary osteoporosis as a beneficial part of pain management. We observed an improvement of pain, mobility, and radiomorphologic parameters and a reduced incidence of fractures at follow-up as long as 3 years after the intervention,” the authors conclude.

Source: Kasperk C, Grafe IA, Schmitt S, et al. 2010. Three-year outcomes after kyphoplasty in patients with osteoporosis with painful vertebral fractures. *Journal of Vascular and Interventional Radiology* 21:701-709.

Hot Topic Highlights

Neuroscience Domain recently posted the following Hot Topics to your website:

Reducing High Blood Pressure May Prevent Stroke

Nine out of 10 strokes are related to 10 simple risk factors, according to a study published recently in *The Lancet*. Analyses revealed that high blood pressure increased the risk of stroke the most out of all other factors, especially in people younger than age 45 years. Five risk factors — high blood pressure, being a smoker, obesity in the midsection, diet, and physical activity — accounted for 80 percent of the strokes that occurred. Ten risk factors -- the previous five plus apolipoprotein (a type of cholesterol), high levels of stress, drinking more than 30 servings of alcohol each month, diabetes, and depression — accounted for 90 percent.

Source:

O'Donnell MJ, Xavier D, Liu L, et al. 2010. Risk factors for ischaemic and intracerebral haemorrhagic stroke in 22 countries (the INTERSTROKE study): a case-control study. Published on *The Lancet* website.

Stenting and Endarterectomy Equally Effective For Carotid Stenosis

Carotid artery stenting and carotid endarterectomy are both effective treatments for carotid artery narrowing, according to a study published recently on *The New England Journal of Medicine* website. Complications were rare, but stenting led to more strokes and endarterectomy led to more heart attacks. Stroke's effects on overall health were greater than heart attack, suggesting that stenting may be slightly riskier in general.

Source:

Brott TG, Hobson RW, Howard G, et al. 2010. Stenting versus endarterectomy for treatment of carotid-artery stenosis. Published on *The New England Journal of Medicine* website.