Epic
INTEGRATION

ver#12122016

SUMMARY

VHI's Epic Integration product allows users of the Epic system to use VHI Exercise Content from within the Epic EMR software. The exercises are imported into Epic's Clinical References and are used completely from within the Epic environment. VHI's PC-Kits product is not involved in the use of the exercise content.

SCOPE OF CONTENT

All of VHI's exercise databases are available for integration into Epic. This includes 44 exercise collections with over 12,000 exercises. The exercises are available individually within the Epic system and are not part of pre-made routines. Each exercise is a document which contains the exercise image and text which can be edited. The exercises can be assembled into routines for use with the patient.

In addition to the images and text, 3500 of VHI's most used exercises have been animated. While the Epic EMR software doesn't allow for direct integration of video content, it does allow for external links to videos. These links are available for use along with the exercise images and text.

The following is a complete list of exercise collections available for use within the Epic EMR system:

Activities of Daily Living	Foam Roller	Orthopedic
Amputee	Gary Gray	Osteoporosis Management
Aquatic: Dynamic – Functional	Geriatric Resource Library	Pediatric
Aquatic Exercise	Geriatric Strengthening	Pilates Mat
Assisted Exercises	Golf	Plyometric, Stabilization & Advanced Functional
Balance Training	Hatha Yoga	Pre-Postnatal
Body Mechanics	Incontinence & Pelvic Floor	Pulmonary
Cardiac	Lymphedema – MEM	Spinal Stabilization
Closed Chain	Manual Therapy	Stability Ball
Complete Balance & Vestibular	Medicine Ball	Strength on Ball
Complete Stretching	Neurodynamic	Strength Training
Dynamic Exercises	Neurological Rehab	Tai Chi
Early Development	Occupational Therapy	Therapeutic Yoga
Eccentric Exercises	Olympic Weight Lifting	Tubing Exercises
	Oral Sensory & Motor	Wheelchair

For more information on each of these exercise collections, please refer to www.vhikits.com.
The exercise content is the same as in PC-Kits.

SEARCHING FOR EXERCISES

Each of the more than 12,000 exercises is available individually from within the Clinical References Activity of the Epic system. The user can assemble the exercises into routines for the patient from within the Epic environment. Searching for the desired exercises is achieved using the search features available within the Epic system but amount to keyword searches and an exercise index.

Much like an Internet search engine, Epic allows for the searching of the VHI exercise content by keywords. As part of the integration process into your Epic installation, keywords for each exercise are imported. These keywords are taken from the exercise titles and text as well as from classification work done by a panel of physical therapists and exercise experts. This classification work was done specifically with the goal of making for effective keyword search results. A couple of sample searches would be "ankle internal rotation" or "hip flexion prone".

In addition to keyword searches, the VHI content is organized into a hierarchical index. This allows users to "drill down" to find the exercises they're looking for. For those users accustomed to using VHI PC-Kits, they can select a kit, then category, etc. to find exercises in a similar way as was done in PC-Kits. Additionally, we have provided an index based on exercise type, body part, etc. For example, there's an index of exercises by equipment used, exercise type, or type of movement. These are similar to the tabs and check boxes in the VHI PC-Kits "Filtered Search".

The list of exercises in each of the categories is provided both by the exercise titles and by small thumbnail versions of the exercise images. This allows finding exercises by exercise title or by a visual index of the exercises. The following two images give an example of how the exercise indexes look.

Finding Exercises by Title

Finding Exercises by Visual Index

USING AND CUSTOMIZING THE EXERCISES

Since each of the exercises is available individually within the Clinical References, they can be used alone or assembled into an exercise routine. The VHI PC-Kits software is not involved in this process, but rather the facilities of the Epic system are used. Anything that you can do with Clinical References documents can be done with the VHI Exercise content.

For example, you can find multiple exercises and place them onto a document to be printed and given to the patient. You can also make that document available through the patient's "My Chart" page. The document can also be stored in the patient's chart.

The exercises contain both the images as they appear in VHI PC-Kits and text. The text can be edited any way you like within the document. You can fill in the blanks for set/reps or change the text entirely. All of this can be done for the individual patient when you are assembling the exercises into the document to be given to the patient. The size of the images is small enough that several exercises can be placed onto a single page.

In addition to the images and text, over 3500 of the exercises have been animated using state of the art motion capture technology. Each of the exercise animations has been reviewed for correctness by a panel of experts. Each exercise has been animated in both male and female as well as four different ethnicities (Caucasian, Asian, Hispanic and African-American). When a patient views an animation, they will see a random gender and ethnicity each time they view the animation. Access to the animation is provided by a link which the therapist can optionally place on the patient document. That is, use of any animation is completely at the therapist's discretion.

ANIMATION DETAILS

The Epic system does not have built-in support for video content. Therefore, animations are made available as simple URLs as part of the exercise text. These URLs can be placed into the patient document just as any other text. URLs placed on the patient materials will appear as clickable links when viewed on the patient "My Chart" pages.

Note that while Epic allows for external links to the video content, the actual content is not viewable by the therapist from within the Epic environment. The therapist would need to copy the link into their own browser to review the animations.

By default, the animations are hosted on a server maintained by VHI. It is also possible for the customer to host the animations themselves. The animation links have been formulated to be as simple as possible, facilitating easy entry from patient printouts. Below are a couple of example animations. As can be seen from the sample URLs, no patient information whatsoever is included.

http://cc.exer.us/67   **http://orth.exer.us/87**

Currently the animations are in Adobe Shockwave format only, which limits their ability to be viewed on some devices. However, VHI will be updating its servers to include other media formats within the next few months.

Note that not all of the exercises have yet been animated. Those which include animations are marked in the exercise index inside Epic with a special icon.

Exercise collections which contain the most animated content are listed below.

Balance Training	Strength Training
Closed Chain	Tubing Exercises
Gary Gray	Pilates Mat
Geriatric Resource Library	Hatha Yoga
Orthopedic	Strength on Ball
Plyometric, Stabilization & Advanced Functional	Eccentric Exercises
	Foam Roller*
Spinal Stabilization	Stability Ball*

* Exercise kits expected to be animated by the end of 2017.
As more exercises are animated, the exercise content in Epic will also need to be updated.

STANDARDIZED ROUTINES

Using features already available in the Epic system, a user can save their favorite routines or exercise variations. In addition, they can make these routines and variations available to others within their organization thus allowing standardization of routines throughout your system. Users are also able to mark their favorite exercises so that they can be recalled quickly for later use.

CONTENT UPDATES

VHI does update exercise content from time to time. These updates are mostly in the form of additional exercise collections. Updates are usually distributed to customers at the time of their yearly contract renewal, unless the update is of particular importance or specifically requested by the customer. There is, however no regular schedule for updates.

Utilizing updates to exercise content in Epic may require importation of just the new content or of the entire VHI content, depending on the nature of the update. Updating the content is optional. There is no requirement to apply any given update, and updates can be skipped if you so desire.

As more exercises are animated, the exercise content will also need to be updated to make the new animations available for use in Epic. This is due to the fact that the animations are links stored in the exercise text. Therefore, as more links become available, the exercises containing them must be re-imported into Clinical References.

When additional media formats are made available for various devices, no updating of the Epic database is required for the new media formats. This is because the animations are stored on an external server and linked to from within the Epic content. Thus the external server (maintained by VHI) is all that needs to be updated as new media formats are made available.

EVALUATING THE VHI CONTENT

VHI has no ability to provide a product demo of our content as it appears in the Epic system. However, all the same exercises are available for viewing as part of the VHI PC-Kits demo. Additionally, the Epic system provides playground and proof of concept environments which can be used for product evaluation.

The playground (PLY) and proof of concept (POC) environments allow end users access for practice/training/demo purposes; there is no real patient data connected to these environments.

Thus, the VHI integration content can be imported into these environments for initial evaluation if desired. VHI can provide a sample exercise kit for performing this evaluation prior to licensing the product.

INFRASTRUCTURE REQUIREMENTS

Because the VHI exercise content is made available purely through Epic's Clinical References, no additional software is required. Epic makes an import process available for bringing documents into the Clinical References database, and that import process is all that's required. The only storage space requirements are for the exercise documents in the Epic database.

The VHI exercises are delivered to the customer as a .ZIP file containing all the exercises as .HTML documents in a directory structure ready for immediate import into Epic. Any assistance in the import process is provided by the customer's Epic representative.

Many customers use Epic through the Citrix System. Because there is no direct support or direct viewing of video content from within the Epic system, there is no impact on the use of Citrix with the VHI content.

As mentioned before, the animations are provided as links that the patient can type or click on. These animations are served by servers maintained by VHI as external links on the exercises. If a customer wishes to host these animations themselves, the animation web pages can be delivered to the customer. Note that the animation links are completely generic in nature and therefore contain no patient or therapist information.

PRICING

VHI's Epic content is sold as an annual license fee. The product is separate from PC-Kits, and therefore PC-Kits is not required in order to use it. Similarly, PC-Kits purchases do not include the Epic integration materials. Please contact VHI for more information on pricing and to obtain a quote for your installation.