Orchard Harvest™ LIS Helps Wray Community Hospital "Look Good"

"When I first came to Wray, I was disappointed that their lab results were still being resulted on pre-printed paper forms or reports printed from several of their instruments, and one of my goals was to present a good looking report," says Keree Olsen, Laboratory Director. "I felt that the report actually was the end-product of the lab and I wanted us to look good."

Back row from left to right: Steve DiVittore, MT(ASCP); Susan Kamla, MLT(ASCP); and Keree Olsen, MT(ASCP); front row from left to right: Sondra Stroup, MT(ASCP) and Ramon Starks, MLT(ASCP).

Keree was first introduced to Orchard in 1994 by Abbott Laboratories and Rob Bush, President of Orchard. At that time, Harvest LIS was in its infancy and running on a Macintosh. "I knew what I saw that day was the best I'd ever seen, and I wasn't going to forget that demonstration," exclaims Keree.

Five years later in 1999, Keree came back to the idea of purchasing an LIS. Keree had remembered Rob's demo from five years before and immediately contacted Orchard. "When I presented the purchase request to the board for 1999 purchase approval, I showed them the many little reports that were actually put on the patient chart," Keree continues. "I spoke about the variance in technologist's hand-writing, some being harder to read than others. I also pointed out the fact that many of these little forms were lost, and we'd be asked to find the copies kept in the lab and make more copies. Not efficient tech time at all."

During the shopping process, Keree saw four or five demos of other LISs, but was never really impressed with any of them. "Honestly, all the other systems did not impress me, and I have no regrets waiting five years to get Harvest," Keree says.

Today, Wray is a happy Harvest LIS user and has been using Orchard Harvest™ Webstation for four-and-a-half years and Orchard's Microbiology module for one year.

Keree continues, "Our Medical Records department relies on us a lot for reprinting patient lab reports when patients show up at the door for copies. Harvest makes it easy to look up results, saving us time from hunting down the chart and trying to find the requested report."

Wray also has an automated billing interface. This has been in place for about four years and has allowed the lab to have more control of what is being billed. "We had been using paper requisitions that were hand keyed into the hospital computer system. With Harvest and the billing interface, we were able to remove the human error factor," says Keree.

When asked about her favorite feature, Keree stated, "Ease of use. I went through a period of two years

www.orchardsoft.com

Where in the World is Orchy?

Orchard's unofficial mascot, Orchy, loves movies, so he visited the remains of a famous movie set recently. If you can identify the country that Orchy visited, send your answer to **news@orchardsoft.com** by August 15 to be eligible to win an Orchard prize package. Last newsletter, David Schmidt of East Tennessee Reproductive Endocrinology Laboratory sent in the winning entry that Orchy was visiting Independence Hall in Philadelphia. Log in to the Orchard website to see where in the world Orchy has been lately! 🍎
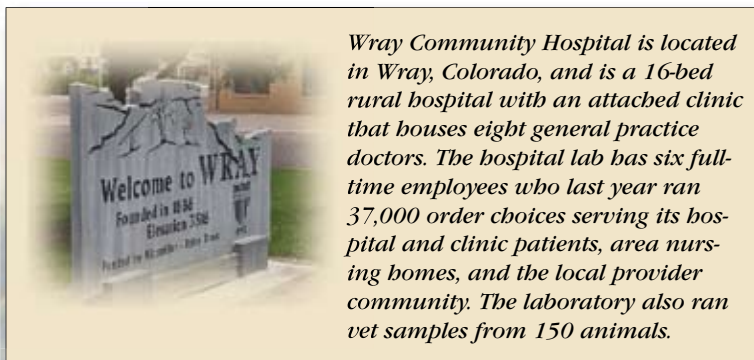
Jeffrey Kain:
Vice President of Development

Jeffrey Kain, Executive Vice President, is a co-founder of Orchard Software Corporation and leads the company's software development group. Jeff is the original author of Harvest LIS, and he maintains an active role in its ongoing engineering and development, in addition to overseeing the activities of the entire software development group.

Jeff graduated with honors from Indiana University in Bloomington, Indiana, with a Bachelor of Science degree in Computer Science. In his spare time, Jeff enjoys travel (especially to his home town of Sturgeon Bay, Wisconsin, in the famous Door County peninsula), music of all kinds, and experimenting with the latest in technology and electronic gadgetry. 🍎

Wray Community

without an applicant and had to rely on temporary technicians. Harvest's rules and ease-of-use makes it easy to train new people. As an example, keeping track of what reports needed faxing to what doctor and what copies needed to go where can be very overwhelming to new staff members, but with Harvest's rules, it's a no-brainer."

So what makes Wray Community Hospital so unique? "Something most people do not know about Wray is that it is located in Yuma County, the largest county in Colorado," says Keree. "However, even with its large size of 3,000 square miles, Yuma County only has a population of 10,000 of which only 2,000 live within city limits of Wray."

Wray Community Hospital is heavily involved in the community. "Outreach is very important to us

Wray Community Hospital is located in Wray, Colorado, and is a 16-bed rural hospital with an attached clinic that houses eight general practice doctors. The hospital lab has six full-time employees who last year ran 37,000 order choices serving its hospital and clinic patients, area nursing homes, and the local provider community. The laboratory also ran vet samples from 150 animals.
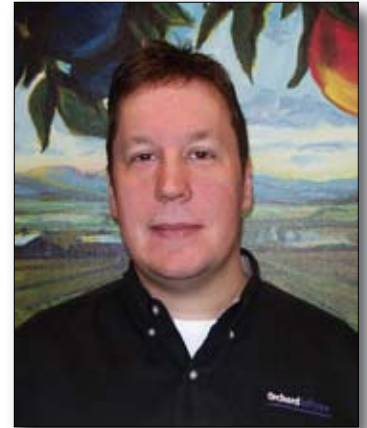
and the county, and our involvement with the community is of what we are most proud," Keree continues. "At Wray, we run our own three-and-a-half week health fair once a year, where specialists fly in from surrounding cities and patients drive 60 to 70 miles to visit these specialists at the hospital. It's the best opportunity they will have instead of driving even longer distances to Denver." Each year the health fair continues to grow; this year the event brought in 1,430 patients.

Over the past seven years, Keree and the staff at Wray have developed a mutually beneficial relationship with the staff here at Orchard Software, and Keree serves as a valuable reference for prospective Orchard clients. Keree says, "Orchard has never given me the opportunity to say anything bad about them. They are very supportive and courteous and their customer service is very good." 🍎

Tech Tip: Enterability Defines Manual Result Entry Abilities

Many Harvest LIS users have requested the ability to restrict how a test result can be entered. Now, in version 7.0, you can configure each lab test to accept a specific type of result.

This field, called "Enterability," is configured in the Lab Tests table.
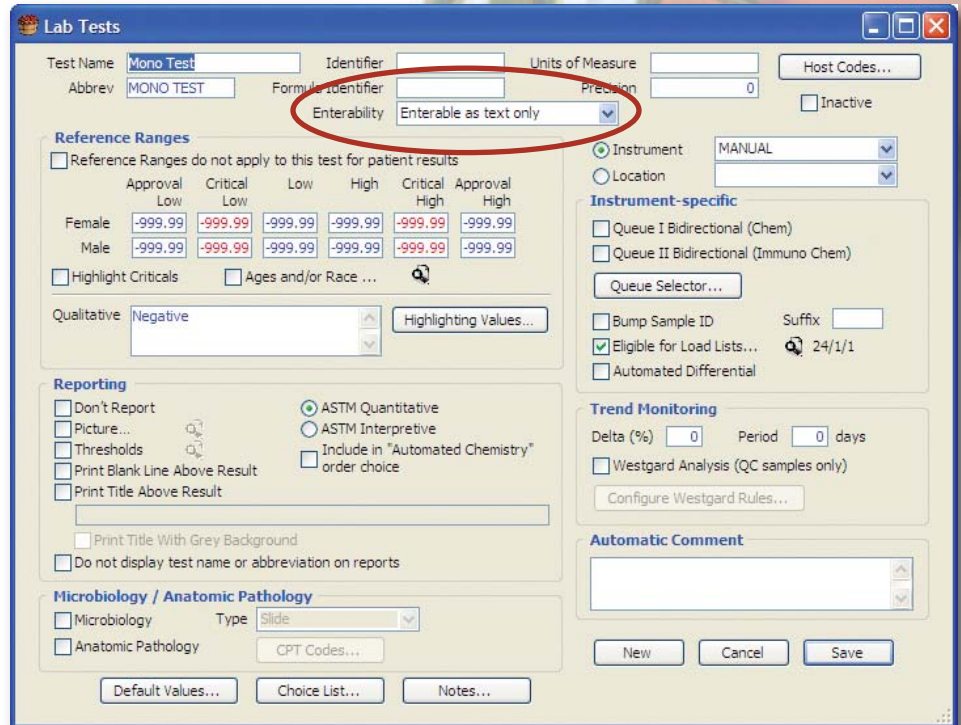
Using this option, you may restrict test resulting to one of four types:
- Enterable as numeric and text
- Enterable as numeric only
- Enterable as text only
- Non-enterable

Use the numeric and text option to allow users to enter results in the numeric and/or text result fields.

Use the numeric only option to allow users to enter results in the numeric field; the text field is restricted. With this option, users may also use the prefix (< >) field.

Use the text only option to allow users to enter results in the text result field; the numeric result field is restricted. Users may also use the prefix field.

Use the non-enterable option to restrict manual editing of the result entirely. For example, with calculated results, users can only alter the result by editing the tests from which it was calculated.

By configuring enterability, you can help ensure that lab tests are resulted properly and consistently, enhancing the reliability and consistency of terminology on patient reports.

Advanced User Training Classes Fill Up Fast!

Orchard's Advanced User Training teaches you how to leverage the full potential of your Harvest LIS and therefore, these classes are very popular. As of this writing, very few spots remain for our 2006 classes.

If you are planning on attending an Advanced User Training class in 2007, it's not too early to talk to your Customer Sales Representative (CSR) to learn more about the 2007 schedule.

Advanced User Training class keeps you current on the new features in the recent software updates and upgrades for Harvest LIS. A number of our customers make attending Advanced User Training a staple in their yearly quest for continuing education; by attending class, you can earn 30.0 P.A.C.E® accredited Contact Hours. It also provides you with an opportunity to mingle with fellow Harvest LIS users and Orchard staff who can help assess issues and spot opportunities for enhancement.

Your Orchard CSR—Ryan Castetter, Susan Dockus, or Kelly James—can provide additional information and costs so that you may budget for the Advanced User Training class. Ryan, Susan, and Kelly can also answer questions regarding add-on modules; additional licenses; analyzer interfaces; host and reference labs interfaces; and field any questions about hardware upgrades, expansions, or replacements. You may reach them at **(800) 856-1948.**

Addition of Order Entry Rules Prevents Mistakes, Enhances Harvest LIS

As many laboratorians are aware, an order that is incorrectly entered in the LIS has a major impact on every phase of processing that follows. These problems can range from incorrect or inadequate sample collection, incorrect tests being performed, compromised analytical performance, and errors in reporting and billing.

Order entry rules, a new feature introduced in Orchard Harvest LIS 7.0, can assist the system administrator with addressing many of the problems frequently encountered during order entry.

You may configure rules for your system in the Rules – Order Entry table in Harvest LIS. When this table first opens, a list of rules currently configured in your system will display. Double-click on a rule to open the detail window for the rule, or click the New Rule button to display an empty detail window, ready for the creation of a new rule.

Adding Rule Conditions

When the rule detail window displays, you should enter a description of your rule. You may then enter conditions under which the rule should be triggered (see Figure 1).

Like all rules tables in Harvest LIS, all conditions on the rule must be true in order for the rule to run. If all conditions are true, Harvest LIS will take whatever actions are specified on the Actions tab.

Selecting Rule Actions

A number of actions can be specified in your rule. Two actions are more general, while other actions fall into one of two categories: order-specific actions, or order choice-specific actions.

General actions that can be taken include:
• Display a pop-up message to the user

Figure 1 - Rule Conditions	
Current order choices	Use this condition to specify one or more order choices that will become the focus of any order choice-specific actions.
Other order choices	Use this condition to specify when a rule must take into account the presence of other order choices on the order.
Draw Locations	Use this condition to specify when a rule must apply to draw locations.
Order Locations	Use this condition to specify when a rule must apply to order locations.
Test Locations	Use this condition to specify when a rule must apply to testing locations.
Providers	Use this condition to specify when a rule must apply to providers.
Insurance Types	Use this condition to specify when a rule must apply to insurance types.
Insurance Companies	Use this condition to specify when a rule must apply to specific insurance companies.
Users	Use this condition to specify when a rule must apply to Harvest LIS or Harvest Webstation users.
Patients	Use this condition to specify when a rule must apply to patients.
Ages	Use this condition to specify when a rule must apply to patients of a specific age.
Priority	Use this condition to specify when a rule must apply to order or order choice priorities.
Sex	Use this condition to specify when a rule must apply to patient gender.
Order Type	Use this condition to specify when a rule must apply to orders placed via host, deferred, recurring, Harvest Webstation orders, or to orders entered via Order Patient Samples.
Time	Use this condition to specify when a rule must take into account the sample's age or elapsed time. This is calculated by comparing the draw date and time of the sample to the run date and time, if any, or the current date and time, if there is no run date and time.

• Add order choices to an order

Order-specific actions that can be taken:
• Prevent order from being saved
• Do not require ICD-9 code entry
• Change the order priority

Order-choice specific actions that can be taken (these will apply to whichever order choices are in the condition "Current order choice is") include:
• Remove current order choices from order
• Change billing status
• Change testing location
• Change order choice priority
• Change initial status

You must also specify when the rule should run by using the "Apply to" menu option.

You can configure rules to apply to:
• Harvest orders
• Harvest reflexes
• Harvest orders and Harvest reflexes
• Webstation orders
• Webstation orders and Harvest orders
• Webstation orders, Harvest orders and Harvest reflexes

Users frequently ask about how to prevent inappropriate ordering for a particular patient type. For example, ordering a PSA on a female patient. Let us examine how we can configure this type of rule in the next section of this article.

Order Entry Rules

Order Entry Rule Example

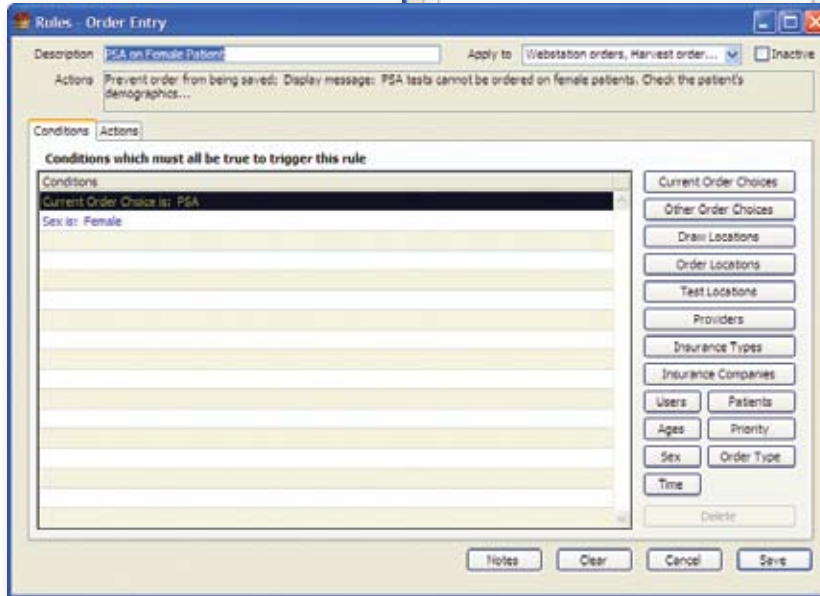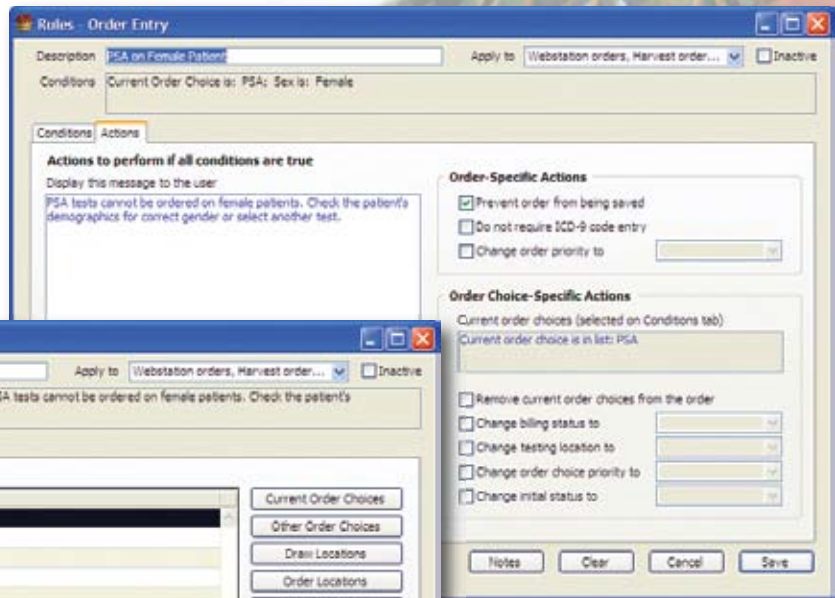In this scenario, a user may try to order a PSA on a female patient. Our rule conditions are:

- Current order choice is PSA
- Sex is Female

If all conditions in the rule are true, Harvest LIS will take the following actions:

- Display this message to the user: PSA tests cannot be ordered on female patients. Check the patient's demographics for correct gender or select another test.
- Prevent the order from being saved.

This rule will apply to Harvest Webstation orders and Harvest LIS orders.

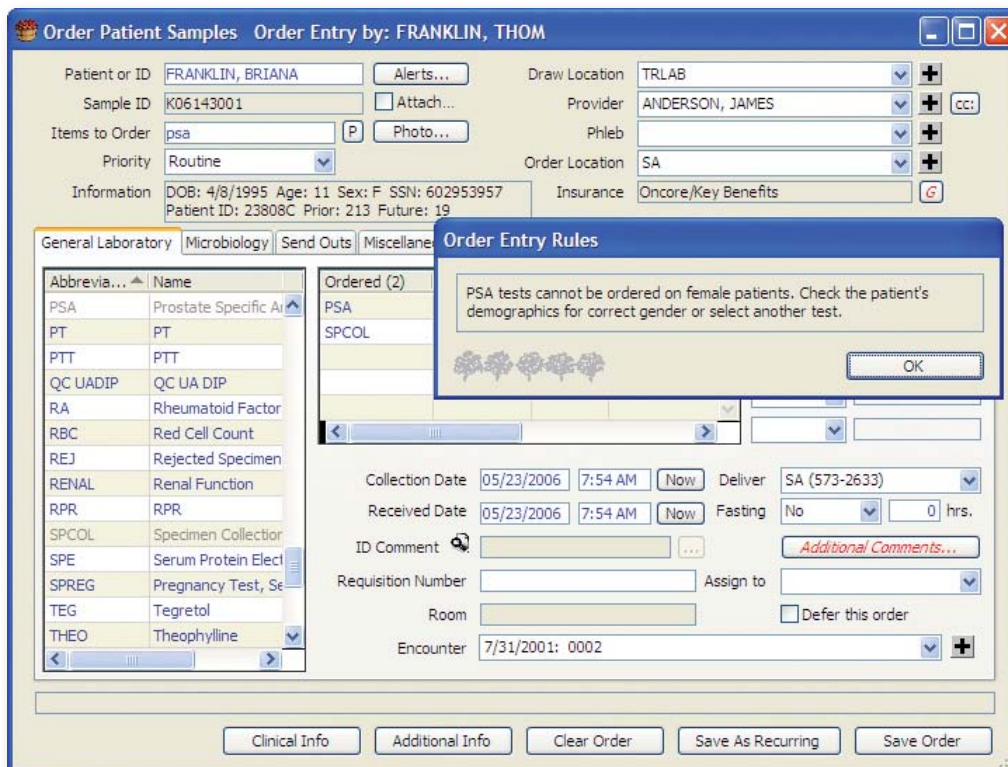*A Sample Rule—Based on the conditions defined, Harvest LIS will take the action specified.*

When does a rule run?

Rules run when the rule conditions are met. In the rule example above, the rule immediately runs when PSA is added to the ordered items list on the Order Patient Samples window, or when the user moves to page 2 of order entry in Harvest Webstation. Rules will apply to orders released from the Release Stored Orders window only if they are released via Order Patient Samples.

Many other scenarios can be accommodated with order entry rules. Use rules to eliminate the possibility of duplicate testing, or consolidate ordering of unbundled tests into appropriate order choices. Rules can be used to correct inappropriate uses of priority (a bacterial culture ordered STAT), or ensure that testing sent to a reference laboratory has the correct billing status or is displayed in the appropriate order choice status in Review Results or Work In Progress. These are just a few of the possibilities that can be handled using this exciting new feature in Harvest LIS. ●

The Example in Action—The user has attempted to order a PSA on a female patient. Based on the rule definitions in Harvest LIS, a pop-up message has been displayed and the order cannot be saved.

Upgrade to Harvest LIS 7.0

Orchard is committed to developing, installing, and supporting the very best laboratory information system, and part of this commitment is annual software upgrades. In May, Orchard Software released Orchard Harvest LIS version 7.0! To take advantage of these new features and keep your Harvest LIS up-to-date, please complete and submit the online Request for Upgrade form by logging on to **www.orchardsoft.com** to ensure an upgrade in a timely manner!

In all, over 350 new features have been added to Harvest LIS 7.0. Of these, Orchard has added nearly 100 new features requested specifically by our users. A few of the new features included in Harvest LIS version 7.0 are: Order Entry Rules, data filters, document & image linking, NCCLS/CLSI-Compliant Antibiogram Report, enhancements to the data browsers, more worklist generation options, more Westgard Rules enhance QC, and new Levey-Jennings graphing capabilities.

If you would like to learn more about Harvest LIS upgrades or have any questions, go to **www.orchardsoft.com** or call Orchard Technical Support **(800) 571-5835**. Upgrades are on a first come first served basis, so don't delay!

Orchard Software President Rob Bush speaks at the 2006 CLMA Think Lab Industry Forum on IT's role in patient safety and the future of molecular diagnostics.

OrchardSoftware

Harvest the Power

701 Congressional Blvd., Suite 360
Carmel, Indiana 46032

Phone: (800) 856-1948
Fax: (317) 573-2633
Email: news@orchardsoft.com
Website: www.orchardsoft.com

Address Correction Requested

Visit The Orchard at The Clinical Lab Expo/AACC in Booth 2203!