

OZtech Systems, Inc.

OZtech Systems, Inc. designs and develops advanced Medical Information Systems and custom software. OZtech's products are designed to improve patient safety, quality of care, efficiency, financial performance, and reduce cost. The paperwork load imposed on healthcare professionals often hinders their ability to deliver timely and effective care, OZtech's products can be used to streamline the paperwork nightmare. Organizations can also utilize OZtech's solutions to carry out clinical research, develop trends, monitor resource utilization, forecast revenues and costs, guide caregivers, assist management, and interact with patients; or deliver a myriad of other services based on customer's specification and needs. OZtech conducts joint research and collaborates with top universities and leading medical centers, in the development of its technologies. Hospitals and medical facilities, utilizing OZtech's solutions, can realize the benefits of advanced research and state of the art medical information systems. OZtech's solutions are designed to be intuitive and easy-to-use, and are Web based requiring only a Browser and an Internet connection.

To deliver effective and efficient quality care, caregivers need timely access to accurate and coherent information. However, healthcare data tends to be vast and scattered on a myriad of disparate systems, which can overwhelm even the most astute medical specialist. OZtech's solutions can seamlessly integrate into any environment without effecting or impacting other systems. Through its universal-interface engine, OZtech can interface with any ancillary or legacy system (e.g. Clinical Laboratory, Pharmacy, ADT, etc.). Since OZtech's solutions can coexist in existing environments, customers can add new capabilities without the need to alter existing deployments. Through intelligence, automation, and integration, OZtech delivers proven and cost-effective solutions to solve healthcare problems. For example, when a Lab test result, indicating urgent drug therapy to prevent a potential life-threatening condition, is detected, the appropriate physician is automatically paged; or if two conflicting therapies are prescribed to a patient the system will promptly alert the physician. OZtech's solutions are customizable and can be tailor-fitted to meet customer's needs. OZtech also develops custom software applications, based on customer's own specifications and needs, at no cost to the customer.

Organizations are reluctant to deploy new solutions and technologies due to risks and up-front costs associated with implementation, hardware, and software; and ongoing expenditures related to support, upgrade, and maintenance. To avoid these issues, OZtech provides its OZworryFree solution to customers. OZworryFree is a cost-effective turnkey solution; all deployment aspects are assumed by OZtech, including application software, hardware, database, implementation, ongoing maintenance, or any other deployment activity. Customer's responsibility is limited to providing a Browser and an Internet connection to its users. OZworryFree eliminates the risk and cost associated with new deployment, OZtech's commitment to your success is 'you pay only if it works'.

OZworryFree

A Complete Turnkey Solution

Organizations are reluctant to deploy new systems and technologies due to risks and costs associated with installation, customization, software, hardware, etc.; and ongoing expenditures, such as daily maintenance, hardware and software support, upgrade, etc. To avoid these issues, all of OZtech's products are delivered in the form of OZworryFree service. OZworryFree is a cost-effective complete turnkey solution. OZworryFree delivers customized solutions based on customers exact specifications and needs. With OZworryFree, OZtech assumes all costs and risks associated with a new deployment, including application software, development, customization, installation, hardware, database, etc.; and ongoing daily activity such as maintenance, upgrades, enhancements, etc. Customer's responsibility is limited to providing a Browser and an Internet connection to its users. OZworryFree eliminates the risks and runaway costs associated with new system deployment. OZtech's commitment to its customers 'you pay only if it works'.

Numerous elements makeup 'total cost of ownership'. 'Total cost of ownership' is the true tally of actual expenditures incurred when deploying a new system. Often, only the initial cost, such as software licensing, hardware, installation, and customization, is taken into account. However, the initial cost is only a fraction of the true total cost of ownership. Total cost of ownership also includes ongoing support and maintenance, upgrades, enhancements, etc. In addition, hidden costs, such as the need to install and maintain application software on users' personal computers, inflate the total cost. As a result, new deployments are plagued with runaway budgets and success uncertainty. OZworryFree is designed to eliminate uncertainty and runaway budgets; OZtech's commitment is 'you pay only if it works'.

OZtech's solutions are Web based and require only a Browser; no application software is maintained on users' personal computers. OZworryFree seamlessly integrates into any environment and is completely transparent to other systems. To bypass the bureaucratic maze, OZworryFree also includes free and easy-to-request ongoing enhancements. A phone call or an email is all that is needed to initiate a request for enhancement; no need for committees, lengthy proposal requests, or other bureaucratic procedures. OZworryFree enables customers to extend capabilities and adapt the system to new needs painlessly and effortlessly, eliminating risks and runaway budgets.

Benefits

- ❑ **Zero Hardware Cost:** OZtech provides all hardware and hardware related infrastructure.
- ❑ **Zero Software Cost:** OZtech provides application software and all related software needs.
- ❑ **Zero Monthly Hardware and Software Support Cost:** OZtech is responsible for support and related costs.
- ❑ **Zero Development and Implementation Cost:** OZtech assumes design through implementation efforts, including installation, customization, etc.
- ❑ **Zero Personal Computer Based Application Software:** no need to install or maintain application software on users' personal computers. OZworryFree is Web based requiring only a Browser and an Internet connection.
- ❑ **Zero Runaway Cost:** no hidden or unexpected costs, 'total cost of ownership' can reliably be ascertained up-front.

- ❑ **Zero Ongoing Administration and Maintenance Cost:** OZtech is responsible for daily administration and maintenance.
- ❑ **Zero Enhancement Cost:** free ongoing enhancements.
- ❑ **Ongoing Enhancements:** OZtech provides ongoing enhancements and upgrades based on customers' requirements and specifications.
- ❑ **Eliminate Bureaucracy:** to initiate an enhancement request, a simple phone call or email is all you need.
- ❑ **Universal Interface Engine:** through its universal interface engine, OZtech can interface with any ancillary or legacy system (e.g. ADT, Laboratory, Pharmacy, financials, etc.).
- ❑ **Seamless Integration:** OZworryFree seamlessly integrates into any environment and is completely transparent to other systems.
- ❑ **Custom Built:** applications are custom built to meet customer's exact specifications and needs.
- ❑ **Web based:** only a browser is needed to access the system.
- ❑ **Internet based:** users can access the system, over the Internet, from any geographical location.
- ❑ **Mission Critical Reliability & Scalability:** Uses proven server and operating system technologies, to deliver unlimited capacity, scalability, and high-reliability, utilizing OZHA (OZ high availability) server technology.
- ❑ **High-grade Security:** 128-bit high-grade security is augmented by the customer's sole control over user access to the system.
- ❑ **HIPAA Compliant:** compliant with HIPAA rules and regulation.
- ❑ **Customer Satisfaction:** OZtech's commitment to its customers is 'you pay only if it works'.

PharmExpert

Pharmacy Decision Support and Alert System

Early intervention plays a key role in the delivery of effective patient care. Early intervention improves the odds for a successful therapy, reduces therapy cost, and promotes quality of care and patient satisfaction. PharmExpert is a Web-based clinical decision support and alert system that delivers timely clinical data notifications to physicians, nurses, pharmacists and other clinicians in order to help detect significant clinical events. PharmExpert facilitates early intervention, and enables pharmacists to annotate actions taken on critical alerts. Trending, administrative reports, and data analysis is available through PharmExpert's extensive reporting capabilities.

To achieve timely intervention, real-time monitoring of data from various legacy systems (e.g. Pharmacy, Laboratory, ADT, etc.) is needed. While human monitoring and screening of data, for abnormal Laboratory test results, conflicting drug therapies, or other anomalies, is possible human monitoring tends to be inefficient, time consuming, costly, prone to errors, and can lead to therapy delays. A clinical rule-base computerized decision support system is most suitable for ongoing monitoring and screening of clinical data. Such a system can guide clinical pharmacists and physicians to direct their attention to critical patients and assist in focusing limited pharmacist resources toward key problem areas in pharmacotherapy.

PharmExpert is an advanced and sophisticated clinical decision support system. Utilizing its Universal-Interface engine, PharmExpert can interface with all legacy data sources (e.g. Pharmacy, Laboratory, ADT, etc.) needed in monitoring patients. All the legacy data is fed into OZtech's central database repository. The feed to the central database repository is done in real-time, and the central database is kept in continuous sync with all external data sources. As new data arrives, it is passed through the rule-based expert engine. When intervention is deemed necessary, the appropriate pharmacist or caregiver is alerted. To deliver effective alerts, PharmExpert is customizable, flexible, and allows each clinical pharmacist, physician, or other caregiver to customize the rules to fit their own needs. Rules can be customized for a single clinician, a group of clinicians, a ward, or a hospital at large. Alerts can be delivered in various forms, e.g. page, Web, reports, email, etc.

Features

- ❑ **Timely Intervention:** quickly alert pharmacists and caregivers when a problem or an urgent drug therapy to prevent a potential life-threatening condition arises.
- ❑ **Rule-Base system:** uses clinical rules to identify patients requiring clinical intervention.
- ❑ **Flexible rules:** robust and customizable rules are used to address the most demanding clinical requirements.
- ❑ **Advance and sophisticated clinical rules:** rules can be constructed based on a wide range of rule-attributes. Rule attributes can include Lab test result thresholds, drug, drug-drug interaction, lab-drug interaction, lab-drug-demographics (e.g. patient age), observations (e.g. patient weight), drug route (e.g. IV), patient location, time interval, and more. Alerts can include any mixture of rule-attributes in varying permutations.
- ❑ **Extensible and adaptable system:** create unlimited number of clinical rules and modify existing rules, on an ongoing basis, to adapt to new drugs and advances in clinical practices.

- ❑ **Real-time alerts:** alert the pharmacist or caregiver of necessary intervention as soon as a problem arises.
- ❑ **Flexible alerts:** alerts can be delivered in various forms, page, web, report, email, etc.
- ❑ **Efficient resource utilization:** focus limited pharmacist resources on key problem areas.
- ❑ **Promote patient wellbeing:** early intervention improves patient-care effectiveness.
- ❑ **Patient Education:** alert pharmacist when medication requiring special instructions is ordered, e.g. inhalers.
- ❑ **Reduce Cost:** alert pharmacist when a more cost effective drug therapy is available, e.g.:
 - The cost of IV Fluconazole is substantial compared to oral Fluconazole, alert pharmacist to switch to oral Fluconazole when appropriate.
 - Antibiotics - alert pharmacist when culture lab results indicate ineffective use of medication.
- ❑ **Expedite Discharge:** alert pharmacists as soon as Lab results are available for patients awaiting discharge pending lab results.
- ❑ **Patient self-help:** patients who measure and monitor their vital statistics (e.g. blood sugar levels) can record their observations over the Internet. In turn, the appropriate caregiver can quickly be alerted when a problem is detected. Further more, patient's self-monitored observations are integrated into the central database repository to become an integral part of the clinical decision support process.
- ❑ **Improve productivity:** allow pharmacist and caregivers to focus their attention on clinical problems.
- ❑ **Prevent alert fatigue:** garden-variety alert systems tend to generate voluminous alerts, requiring the caregiver to weed out superfluous alerts. This puts extra burden on the caregiver and leads to alert fatigue. PharmExpert in contrast, is fully customizable, and can handle clinical rules of any complexity to automatically weed out any unwanted alerts.
- ❑ **Benefit inexperienced pharmacists:** utilizing proven and well-established rules, guide inexperienced clinical pharmacists to direct their attention to critical areas.
- ❑ **Reports and Trending:** through extensive reporting capabilities, monitor trends, observe resource utilization (Lab, Pharmacy, etc.), conduct studies, etc.
- ❑ **Central Database Repository:** aggregate data from all pertinent sources (Pharmacy, Laboratory, ADT, etc.) to support advanced clinical rules.
- ❑ **Universal-Interface:** able to interface with any medical system.
- ❑ **Annotate intervention:** pharmacists can annotate each alert to record intervention or course of action taken. Annotation can be in the form of free text or a selection from a predetermined pull-down menu.
- ❑ **Patient admission information:** enable pharmacist to identify new patients admitted over last 24 hours (or other desired period), admitted adult patients, admitted pediatrics patients, list all admitted patients in a single location, etc.
- ❑ **Easy alert monitoring:** track alerts by patient, location, rule-class, or other criterion.
- ❑ **Web based:** using a Browser and Internet connection users can access the system from any location.
- ❑ **High-grade security:** high-grade security is built into all applications and data access.
- ❑ **HIPPA:** HIPPA compliant.

Medication Safety

Medication Reconciliation System

Across the United States, approximately 1.3 million people become ill or have adverse side effects from medical therapy each year. Medication errors are one of the leading causes of injury to hospital patients, and chart reviews reveal that over half of all hospital medication errors occur at the interfaces of care. To remedy the problem, the Joint Commission on Accreditation of Healthcare Organizations (JCAHO) has embarked on the patient safety initiative – Medication Reconciliation. In 2006, The Joint Commission announced its Patient Safety Goal #8: to “accurately and completely reconcile medications across the continuum of care.”

Medication reconciliation is a key initiative in the Institute for Healthcare Improvement's (IHI) (www.ihl.org) 100,000 Lives Campaign. IHI's stated goal is: “The 100,000 Lives Campaign is an initiative to engage U.S. hospitals in a commitment to implement changes in care proven to improve patient care and prevent avoidable deaths. The Campaign is the first national effort to promote saving a specified number of lives by a certain date (June 14, 2006).” Over 3,000 hospitals have joined the 100,000 Lives campaign.

Medication errors related to medication reconciliation typically occur at the "interfaces of care" when a patient is admitted to, transferred within, or discharged from a health care facility. Furthermore, hospitals discovered that 77 percent of all patients are discharged with inadequate medication instructions. A Medication Reconciliation system can successfully reduce medication errors; some hospitals reported an 80 percent reduction.

OZtech's Medication Reconciliation System ensures that a complete and current list of a patient's medications be obtained upon admission, updated during the course of care, and communicated to next provider of care seamlessly.

OZtech's Medication Reconciliation System enables hospitals to avoid medication errors such as omissions, duplications, dosing errors, or drug interactions. The system enables caregivers to compare all prescribed medications, past and present, and maintain the list on an ongoing basis across the continuum of care. Upon discharge or transfer, the system will generate all required reports, prescription, instructions to patient, and communicate a list of prescribed medications the patient is taking to the next healthcare provider to ensure a continuum of care.

Medication errors related to medication reconciliation typically occur at the transition points in care including changes in setting, service, practitioner, level of care, or when a patient is admitted, transferred, or discharged. OZtech's Medication Reconciliation System ensures that patients are handed-off to the next caregiver automatically and seamlessly at all transition points. At all times, caregivers can review or update the full set of all documentation, medication lists, and other pertinent information such as allergies in one easy to access place.

It was reported that 63 percent of medication errors, resulting in death or major injury, resulted from breakdowns in communication. By encompassing the entire continuum of care, OZtech's Medication Reconciliation System prevents communication breakdowns and patients falling between the cracks.

Features And Benefits

- ❑ Facilitate a systematic approach to reconciling medications, starting with reconciliation at admission.
- ❑ Fully customizable system to meet customer's exact specifications, needs, and workflow.
- ❑ Browser-based with high-grade security, standardized well-known interface, no need to learn a new front-end.
- ❑ Easy-to-Use/Fast data entry, intuitive and doesn't require extensive training. Medication lists and reports can easily and quickly be viewed on-line in one easy-to-access place.
- ❑ Improve efficiency by streamlining the Medication Reconciliation process.
- ❑ Collect a complete list of current medications, including dose and frequency along with other key information, for each patient on admission.
- ❑ Facilitate easy on-line comparison between patient's home medication list and in-hospital prescribed medications.
- ❑ Identify newly admitted patients who have not gone through the process of home medication reconciliation.
- ❑ Facilitate exception process; e.g. activate follow-up pharmacist, if patient's home medication list needs further investigation.
- ❑ Automatically transfer newly admitted patients, who have gone through the initial process of home medication information gathering, to the verifier stage.
- ❑ Improve productivity by automating the process required to document medication orders and counseling/instruction.
- ❑ Automatically generate all needed reports at discharge or transfer.
- ❑ Automatically hand-off patients to the next caregiver throughout all transition points of care including admission, changes in setting, service, practitioner, level of care, discharge, or transfer.
- ❑ Accurately and completely reconcile medications across the continuum of care.
- ❑ Automatically communicate a complete list of the patient's medications and other pertinent information and documentation to the next provider of service.
- ❑ Provide real-time access to complete medication profiles and other pertinent information at all stages of care.
- ❑ Provide templates for automatic report generation such as patient's discharge medication list, taper list, patient discharge plan, prescriptions to outside pharmacy, instructions to patient, or any other desired report.
- ❑ Provide on-line copies of all reports, and where desired transmit electronic copies, e.g. affiliate hospitals.
- ❑ Generate detailed discharge reports for patient's primary physician.
- ❑ Generate detailed medication prescriptions to patient's community pharmacy.
- ❑ On discharge, generate detailed reports, in clear layman language, for patient to take home, including patient medication list, directions and instructions, or any other desired document.
- ❑ To track adherence to compliance, provide extensive and unlimited reporting capabilities and statistics generation such as average time to intervention, average time from admission to initial medication reconciliation, compare performance of one service to another, produce report cards, establish trends, or any other desired statistic.

OZlrs

Laboratory Results System

OZlrs is a state-of-the-art enterprise wide solution, designed for clinical laboratories that desire a WorryFree and powerful solution for online viewing of laboratory test results. Feature-rich with extensive search and correlation capabilities, Ozlrs provides a Web-based technology to address the urgent needs for delivering timely and hassle free service to physicians and patients alike in geographically dispersed sites. Unlike other available systems, OZlrs combines the latest technologies to deliver an open industry-strength solution, which can easily scale to fit any business needs and size.

OZlrs utilizes leading edge hardware/software technology, combined with rigorous password and high-grade security to achieve complete confidentiality of medical records.

Features

- ❑ **Browser-based:** Standardized, well-known interface - no need to learn a new front-end. Works with or without a laboratory order-entry system.
- ❑ **Easy-to-Use/Fast data entry:** Intuitive and easy-to-use, doesn't require extensive training of medical personnel. Results can be viewed quickly and easily, enabling physicians to spend more time analyzing results and less time on navigating through complex screens.
- ❑ **Out Reach:** physicians who send laboratory work to be done outside, but are not affiliated with that lab, can view test results over the Internet, eliminating the need for costly carriers, faxes, etc.
- ❑ **Reference Laboratory:** OZlrs's flexible architecture enables cooperating laboratories, in geographically dispersed locations, to link-up, collaborate, share and exchange information, and setup a virtual reference laboratory.
- ❑ **Monitor Laboratory Efficiency:** To monitor laboratory efficiency, alerts can be sent (via page, email, etc.) to designated personnel informing about overdue laboratory test results. Test's time to alert interval, can be adjusted individually, e.g. some tests can be alerted after one week, yet others after two days.
- ❑ **Annotation:** Physicians can annotate individual test results, to instruct and inform patients.
- ❑ **Patient Can View Test Results:** Subject to physician's approval, patient can view test results over the Internet. Patients can be alerted via email or page, when test results are available for viewing. Patients can get faster access, even while travelling, to test results. This can lead to improved patient satisfaction and cost savings by eliminating the need to have nurses or physicians make phone calls or 'stuff envelopes'.
- ❑ **Patient Self Help:** At risk patients, who regularly monitor and measure their vital statistics, e.g. blood pressure, can input the results into the system over the Internet. In turn, utilizing OZlrs' rules and logic, the appropriate physician can be alerted automatically when a problem is detected. Early detection of problems invariably can lead to a less radical therapy, resulting in improved patient's quality of life and satisfaction, and cost savings.
- ❑ **Generates physician report cards:** Provide feedback to physicians and department chairs, to help them identify problem areas and improve quality of care.
- ❑ **Graph Options:** Short-cut button option for displaying results in a graphical fashion, enabling physician to quickly identify trends in patient's evolving condition.

- ❑ **Out of Range Result Values:** For quick and easy detection of potential problems, color code in red 'out of normal range' test results.
- ❑ **Extensive Viewing Options:** Test results can be selected by date, patient ID, ordering physician, attending physician, copy to physician, etc.
- ❑ **Show unviewed test results:** When a physician logs on, a patient list is presented containing all of the patients having unviewed laboratory test results. No need to remember patient ID, or a list of 'all my patients whom I ordered test for and didn't view the results yet'.
- ❑ **Covering Physician:** To ensure timely viewing and analysis of test results, automatically assign out-of-office physician's patients to covering physician.
- ❑ **Laboratory Tests Tracking:** Track laboratory orders by time ordered, time results produced, time and name of viewing physician, and time patient viewed results.
- ❑ **Zero Capital & Maintenance Costs/OZworryFree:** A cost-effective turnkey solution. No need to purchase hardware, database, or application software. Zero system, database, or application administration overhead. No need to purchase costly hardware or software maintenance contracts. No need to maintain proprietary application software on front-end users' PC.
- ❑ **Mission Critical Reliability & Scalability:** Uses proven server and operating system technology, to deliver unlimited capacity, scalability, and high-reliability, utilizing OZHA (OZ high availability) server technology.
- ❑ **High-grade Security:** 128 bit high grade security is augmented by the customer's sole control over granting and revoking user access to the system.

OZlcs

Laboratory Compliance System

OZlcs is a state-of-the-art client server solution for clinical laboratories that require a streamlined, yet powerful tool, for complying with Medicare and other insurance regulations for laboratory testing. OZlcs is an enterprise wide solution, enabling organizations to provide services to users in multiple geographically dispersed sites.

OZlcs is based on a highly extensible open architecture, utilizing well-established industry standards such as RDBMS, SQL, TCP-IP, and Web technology. It provides complete flexibility for end-user or vendor updating of compliance rules, local test code acronyms, CPT-4 and ICD-9 codes, and price files.

Web-enabled, browser-based, superb ease-of-use, rapid data entry, audit tools, unlimited capacity to expand, and ability to manage multiple sites from one server are just a few of the powerful features of OZlcs.

Features

- ❑ **Browser-based:** Standardized, well-known interface - no need to learn a new front end. Works with or without a laboratory order-entry system.
- ❑ **Fast data entry:** Codes can be entered by rapid keystroking. Does not require cumbersome menus or point & click gimmicks that slow data entry.
- ❑ **Local test code acronyms:** Use test code abbreviations from your own requisitions or LIS. No need to learn new test code acronyms.
- ❑ **Generates ABNs:** Automatically prints ABNs with test names, reasons for waiver, test charges, etc.
- ❑ **Total solution:** Can handle Medicare, as well as other insurance rules and regulations, e.g.: Blue Cross, Brown & Toland, etc.
- ❑ **Easy searching of ICD-9 codes:** Quickly locate ICD-9 codes by searching on diagnoses.
- ❑ **Simple updating of codes and regulations:** Easy to update/modify test codes, compliance regulations, price files, and ABN forms through user-friendly maintenance module.
- ❑ **Includes compliance auditing tools:** Monitors test utilization and volume trends for the top 30 tests in accordance with recommendations of the model compliance plan of the Office of Inspector General.
- ❑ **Generates physician report cards:** Provide feedback to physicians and department chairs and help them identify problem areas and improve compliance.
- ❑ **Zero Maintenance/OZworryFree:** A cost-effective turnkey solution. No need to purchase hardware, database, or application software. Zero system, database, or application administration overhead. No need to purchase costly hardware or software maintenance contracts. No need to maintain proprietary application software on front-end user PC. Changes in compliance regulations, test codes, or price files are administrated centrally, avoiding the need to send technicians to multiple sites to apply necessary updates.
- ❑ **Mission critical reliability:** Uses proven server and operating system technology, to deliver a robust solution, utilizing OZHA (OZ high-availability) server technology.
- ❑ **Highly scalable:** Easy to add new sites at multiple, geographically dispersed, locations including satellite clinics, phlebotomy stations, hospitals, and physician's offices.

- ❑ **User Defined Web Links:** Easy to add hypertext links to other Web resources. Link to your on-line laboratory manual and give customers immediate access to test information, pricing, turnaround times, specimen requirements, etc.
- ❑ **High-grade Security:** 128-bit high-grade security is augmented by the customer's sole control over granting and revoking user access to the system.

Patient Self-Help

Web Based Patient Self-Help Center

An ounce of prevention is better than cure. Proactive healthcare is paramount in promoting patient wellbeing, quality care, and early detection. Early intervention plays a key role in the delivery of effective patient care. Early intervention improves the odds for a successful therapy, reduces therapy cost, and promotes quality of care and patient satisfaction. For example, when people with diabetes can control their blood sugar (glucose), they are more likely to stay healthy. To control blood sugar, diabetic patients measure their blood glucose levels on a daily basis. In addition, a patient may also visit his doctor every few months, at which time the doctor can be downloading the glucose readings from the patient's device for analysis. This process is time consuming and can lead to delays in the detection of clinical problems. A more sensible approach would be to have the patient record his observations over the Internet, on a daily basis, and in turn have a system alert the physician as soon as a clinical problem is detected. Automating the process via the Internet will also save the physician time, since the system will be carrying out all observation analysis without the need for the caregiver to handle any device. The analysis can be presented to the physician in various formats including graphics, tabulation, moving averages, etc.

OZtech's 'Patient Self-Help' center is a Web based solution, accessible over the Internet. It promotes early intervention, improves communication between doctor and patient, allows patients to record unlimited number of observations, automatically analyzes patient's observations, alerts physicians when a potential clinical problem is detected, allows patients to view laboratory test results over the Internet, can be used to educate patients, and much more. Since all of OZtech's solutions are flexible and customizable, OZtech can easily adapt the system to address any needs a healthcare provider may have.

Features

- ❑ **Web based:** Patients and caregivers need only a browser to access the system.
- ❑ **Internet based:** patients and caregivers can access the system over the Internet from any geographical location.
- ❑ **Track any type of observation:** patient or caregiver can record any type of observation, e.g. blood glucose levels, weight, height, blood pressure, pulse, diet, etc.
- ❑ **Unlimited observation recording:** patient or caregiver can record unlimited number of observations, including observation date and time and annotation. Observation can be recorded in any location, e.g. hospital, home, on the road, etc.
- ❑ **Automatic observation analysis:** all observations are automatically and continually being analyzed, and when a clinical problem is detected an alert can be generated.
- ❑ **Advanced analysis rules:** the system can utilize unlimited number and complexity of clinical rules needed to carry out observation analysis.
- ❑ **Patient education:** post any instructions to patient, e.g. how to take medication, diet, articles, etc.
- ❑ **Improve communication:** unlimited secure communication between patient and caregiver with alerts where desirable.
- ❑ **Web viewing of laboratory test results:** physician can annotate and release laboratory test results for patient viewing over the Internet. The system also keeps track whether and when patient viewed test results.
- ❑ **High-grade security:** 128-bit security, customer has full control over patient account profile, login, and access.

- **Scalable and extendable:** the system can handle any number of caregivers and patients.
- **Adaptable and flexible:** highly customizable system, which can be adapted to address any medical requirements and needs, at no cost to customer.

Resource Utilization

Resource Utilization System

OZtech's Resource Utilization System is designed to enable hospital and medical center management to monitor the utilization of resources. For example, the Laboratory director may be interested to find out which physicians order the highest number of tests per patient, and of those what type of diagnostics were the most prevalent, or compare within a department or clinic the highest users of the laboratory resources. The pharmacy director on the other hand, would be interested in medication utilization, by physician, by department, or comparing medication utilization of one hospital to another.

The Resource Utilization System can also be used for medical research through data mining. Physicians and other caregivers can generate reports to detect trends and assess therapy effectiveness.

Features

- ❑ Ad hoc and real time reporting capabilities.
- ❑ Quick and unlimited access to reports through a Browser.
- ❑ Mail reports to a group of people, when desired.
- ❑ Unlimited reporting capabilities based on data from multiple systems including ADT (admission, discharge, and transfer), Laboratory, pharmacy, and other medical systems.
- ❑ Unlimited new report enhancements, addresses ongoing changes in customer needs.
- ❑ Enable physicians and care givers to carry out medical research through data mining.
- ❑ Trending, through extensive reporting capabilities, develop trends such as, meantime between test ordered and results reported, longest pending tests, effectiveness of initial drug therapy, etc.

Clinical Research

Clinical Research Facility

Clinical research plays a key role in the development of new therapies. Reliable clinical research requires access to diverse and large amounts of data. Through in-depth data analysis a clinical researcher can evaluate the validity and effectiveness of a new therapy. To facilitate in depth and through data analysis, access to numerous data sources is desirable.

For example, acute pancreatitis is an inflammatory process of the pancreas that is associated with morbidity that may be mild to severe. The early and accurate identification of patients at risk for developing severe acute pancreatitis is essential to minimize morbidity and mortality, through aggressive monitoring and treatment in the intensive care unit. To evaluate the accuracy of a new scoring system used to identify at risk patients, a clinical study is needed. To carry out the clinical study, access to various data sources, such as laboratory, radiology, ADT, etc. is required. However, to facilitate extensive data analysis, all of the data must reside in a central database repository. In addition, the clinical researcher conducting the study must have access to powerful analysis tools needed to evaluate the data.

Utilizing its Universal-Interface engine, OZtech can interface with all ancillary data sources (e.g. Pharmacy, Laboratory, ADT, etc.) needed to construct an exhaustive central database repository. The feed to OZtech's central database repository is done in real-time, and the central database is kept in sync with all external data sources. Utilizing OZtech's extensive data analysis and reporting tools, researchers can conduct comprehensive studies, identify trends, produce reports, or perform other clinical research functions.

Features

- ❑ **Unlimited Data Sources:** OZtech's central database repository can compile data from numerous sources such as laboratory, pharmacy, radiology, ADT, etc.
- ❑ **Unlimited Database Size:** The central database repository can store unlimited amount of data.
- ❑ **Universal-Interface Engine:** Can interface with any medical system.
- ❑ **Flexible Database Design:** The central database repository can be tailor-fitted to comply with any clinical study requirements.
- ❑ **Unlimited Data Elements:** Central database can accommodate any data field, e.g. patient's demographics, patient observation, lab tests, pharmacy, ADT, etc.
- ❑ **Advanced Analysis Tools:** Powerful data analysis tools. Data analysis can be carried out in any fashion: numerical, heuristic, relational, hierarchical, time domain, etc; and on any field, single field, multi-fields, compound fields, field-field interaction, etc.
- ❑ **Real-time/Continuous Analysis:** Data can be evaluated in real-time and the systems can alert clinical researches when additional, time sensitive, steps are required. E.g. A clinical researcher may need to carryout additional tests if lab results of amylase and lipase are abnormal, when studying the roles of amylase and lipase in the diagnosis of acute pancreatitis. Clinical researchers can use OZtech's clinical research system to setup unlimited number of clinical rules and have the system alert them (by page, email, etc.) when additional testing is required.
- ❑ **Extensive Analysis Viewing Options:** Output format, resulting from data analysis, can be presented in a multitude of formats including: graphics, tabulation, numerical analysis, alerts, etc.

- ❑ **Zero Capital & Maintenance Costs, OZworryFree:** A cost-effective turnkey solution. No need to purchase hardware, database, or application software. Zero system, database, or application administration overhead. No need to purchase costly hardware or software maintenance contracts. No need to maintain proprietary application software on front-end users' PC.
- ❑ **Mission Critical Reliability & Scalability:** Uses proven server and operating system technology, to deliver unlimited capacity, scalability, and high-reliability, utilizing OZHA (OZ high availability) server technology.
- ❑ **High-grade Security:** 128 bit high grade security is augmented by the customer's sole control over granting and revoking user access to the system.

OZCHAS

Anticoagulation Therapy Management System

Comprehensive Hemostasis and Antithrombotic Service (CHAS) is a leading cause of medication therapy injury according to the Joint Commission report. The Joint Commission established “a new Requirement to take specific actions to reduce the risks of patient harm associated with the use of anticoagulant therapy”. “The new anticoagulant therapy Requirement addresses a widely-acknowledged patient safety problem and becomes a key element of the Goal: Improve the safety of using medications.” The Joint Commission requires that in 2008 hospitals begin “a one-year phase-in period that includes defined milestones. Full implementation is targeted for January 2009.” for anticoagulant therapy.

The Leapfrog Group introduced a safety standard for hospitals to achieve with regard to the management of antithrombotic therapy. The safety objective is for hospitals to ensure that antithrombotic therapy is safe and effective. They defined the problem as, “antithrombotic therapy is a complex and labor-intensive intervention for which success depends upon correct dosing decisions, close attention to many details, and good communication among all parties involved”.

Optimal anticoagulation management occurs when a systematic and coordinated process is used that includes dedicated management by a qualified healthcare professional that ensures reliable patient scheduling and tracking; accessible, accurate, and frequent Prothrombin Time (PT)/International Normalized Ratio (INR) testing; patient-specific decision support and interaction; and ongoing patient education.

OZtech developed OZCHAS to manage CHAS therapy across the continuum of care. OZCHAS automatically identifies new patients admitted to the hospital for antithrombotic therapy; it then alerts the appropriate pharmacist and guides the caregiver through the process. It continuously monitors pertinent laboratory test levels, and alerts the pharmacist when intervention is needed. OZCHAS enables the pharmacist to view, in a single place, a summary of all the information that is needed to carry out the desired clinical decision. Utilizing advanced clinical rules, OZCHAS estimates the patient’s discharge date. As patient’s discharge date approaches, the system verifies that all necessary actions have been carried out and alerts the pharmacist if additional actions are required. The system coordinates follow-up visits and communicates to the next provider of care visit information by forwarding a discharge report, which summarizes all pertinent information such as laboratory test results, medications taken, diagnosis, and required patient monitoring.

OZCHAS serves as the integrating mechanism between clinical knowledge and the clinical setting. It iterates the complexities associated with diagnostic and treatment algorithms and protocols with the patient-specific variables to assist the clinical pharmacist in delivering optimal care.

OZCHAS is a comprehensive anticoagulation management system which seamlessly integrates into any hospital environment. By interfacing with hospitals ADT, clinical laboratory, and pharmacy systems, OZCHAS can deliver a fully automated and integrated solution to manage all aspects of anticoagulation therapy. OZCHAS is a cost effective solution; OZCHAS is delivered in the form of OZworryFree, all you need is a Browser and an Internet connection and you are ready to use it; no hardware, software, development costs, or maintenance is need. OZCHAS is designed to improve patient safety, quality of care, efficiency, and financial performance.

Features

❑ Integrated Solution

By interfacing with the hospital's ancillary systems (ADT, clinical laboratory, and pharmacy) OZCHAS can present in one central location all of the pertinent information needed to carry out informed clinical decisions. OZCHAS displays only the clinical relevant laboratory results and medications taken, eliminating clutter and superfluous information. The following screen depicts the integration of the three data sources: ADT, clinical laboratory, and pharmacy.

❑ Discover Patients On Anticoagulation Therapy

Utilizing advance clinical rules, developed in collaboration with a major research center, OZCHAS automatically identifies new patients admitted for Anticoagulation Therapy and estimates time to discharge. At all times, OZCHAS maintains a list of all patients undergoing Anticoagulation Therapy. The patients list is presented to the pharmacists in color coded format, *yellow* – patient recently admitted and initial action is needed; *red* – patient nearing discharge and coordination with next provider of care is needed; *white* – initial action has been taken and no further action is needed at this time. Errors related to Anticoagulation Therapy typically occur as a result of miscommunication between care givers and are prominent at the transition points in care including changes in setting, service, practitioner, level of care, or when a patient is admitted, transferred, or discharged. OZCHAS ensures that patients are handed-off to the next giver of care automatically and seamlessly at all transition points, admission through discharge and transfer. At any given time caregivers can easily review the full list of patients on Anticoagulation Therapy.

❑ One Screen Therapy Management

OZCHAS presents in one central location all of the information needed to carry out clinical decisions. With a few clicks pharmacists can assign diagnosis, INR goals, anticipated duration of therapy, etc. and select which laboratory test results and medications to include in the discharge report (see figure). Having all the pertinent information on a single screen improves patient safety, productivity, and allows pharmacists to quickly generate discharge reports to be transmitted to the next provider of care. OZCHAS ensures that a complete and current list of a patient's medications and lab results be obtained upon admission, updated during the course of care, and communicated to next provider of care seamlessly.

❑ Clinical Alert System

Safe and effective use of anticoagulants entails adherence to strict dosing, monitoring, and patient management guidelines. There are many challenges to monitoring the effects of anticoagulant therapy to consider when making dosing adjustments. This includes what laboratory tests should be used, when they are measured, and how they should be incorporated into management plans. Management plans should also consider how to initiate anticoagulation therapy, and how it will be maintained for the duration of planned therapy.

OZCHAS includes an advanced clinical alert system which is highly flexible, customizable, and can handle the most demanding and complex clinical rules and guidelines. OZCHAS continually monitors the appropriate laboratory results and medication orders and evaluates them against the clinical rules and guidelines. OZCHAS can dramatically reduce time to intervention, resulting in significant improvements in patient safety. OZCHAS can be used to set therapy guidelines, and when a laboratory result indicating dosing adjustment is needed OZCHAS will page the pharmacist. OZCHAS can also be used to alert caregivers when a desired laboratory test was not ordered and is needed to verify proper therapy. In addition, OZCHAS can be used to record corrective actions taken by the pharmacist, annotate each alert, and as a communication tool between the pharmacists.

❑ Discharge Reports

OZCHAS automatically generates discharge reports, with detailed information and instructions for the next provider of care. In addition, OZCHAS generates patient education reports and coordinates follow-up visits with the next provider of care.

□ Improve Efficiency And Financial Performance

OZCHAS replaces the time consuming and error prone manual process of Anticoagulation Therapy with automated process which improves patient safety, efficiency, and financial performance. OZCHAS enables pharmacists to spend more time delivering care and obviates the need to spend long hours on scanning laboratory test results and medication reports. In addition to improving patient safety and quality of care, OZCHAS improves productivity and financial performance. It is estimated that every day pharmacists spend hours on clinical med+lab profile reviews. By utilizing OZCHAS profile reviews can be accomplished in minutes. Even a small department with only a few pharmacists can realize savings of thousands of man-hours annually, leading to significant productivity gains. Improving quality of care leads to improved financial performance, prevention is better than cure.

Laboratory Outreach Enabling Technologies

Laboratories interested in expanding their outreach business need a cost effective and scalable solution to receive laboratory test orders and communicate results back to the ordering physicians. Such a solution needs to be both economical and be able to expand rapidly as new business opportunities arise. To assist laboratories in expanding and promoting their outreach programs, OZtech has developed a suite of outreach technologies, which provide cost effective and scalable solutions for laboratories interested in rapid growth.

To facilitate seamless communication between disparate Laboratory Information Systems (LIS), OZtech developed an advanced Universal Interface Engine (OZUIE). OZtech's Universal Interface Engine is a cost effective and an innovative solution designed to meet the most demanding needs of hospitals needing to exchange information with affiliates. OZUIE serves as a communication conduit connecting any number of laboratory information systems through a single interface. OZUIE functions as a router, routing the order and result messages as needed, and a converter, converting the message originator LIS's format to the receiver's format. In conjunction with OZUIE hospitals can also deploy OZtech's Web based order entry and results system, and OZtech's Web based Patient Self Help portal to achieve robust outreach capabilities.

All of OZtech's solutions are provided in the form of OZworryFree. OZworryFree is a Web based cost-effective turnkey solution; all deployment aspects are assumed by OZtech including application software, hardware, database, implementation, ongoing maintenance, or any other deployment activity. Customer's responsibility is limited to providing a Browser and an Internet connection to its users. OZworryFree eliminates the upfront costs and risks associated with new deployment, OZtech's commitment to its customers is 'you pay only if it works'.

Features

□ Universal Interface Engine

OZtech's universal interface engine (OZUIE) provides seamless communication between disparate and geographically dispersed Laboratory Information Systems (LIS) and physician offices. While most LIS use the HL7 standard to broadcast and receive data, OZUIE can facilitate any communication protocol including HL7, XML, SQL, etc. Hospitals seeking a vibrant, efficient, and successful outreach program need the ability to exchange laboratory data electronically. The old paradigm to communicate information between multiple LIS is to deploy a separate interface engine for every communication channel. A reference laboratory consortium comprised of N members, exchanging lab orders and results between the various members, will require ' $N \times N - 1$ ' number of interfaces deployed on every LIS. Deploying multiple interfaces on a LIS is expensive and time consuming; furthermore, often a direct communication between two LIS may not be feasible due to inconsistent HL7 standard implementation by the various vendors. To address these issues, OZtech developed its OZUIE to be robust, flexible, scalable, and be able to meet the most demanding requirements. To reduce cost and to enable rapid growth, OZUIE facilitates communication with multiple LIS through a single interface. For example, a laboratory consortium consisting of N member will require only a single interface on each LIS when utilizing OZUIE.

By utilizing OZUIE hospitals can realize substantial cost savings, reduce work, and be in a position to expand their outreach program quickly and effortlessly. OZUIE provide the functionality of a router and a converter. As a router, OZUIE automatically routes every data message to the appropriate LIS. As a converter, it converts each message to conform to the target LIS's native format. In addition OZUIE can create new message segment elements for billing, ADT, etc. to eliminate the need for manual labor. Hospitals can utilize OZUIE to implement a Web based order entry and results system, to enable outside physicians to order tests and view results over the Web; and for physicians practice group, that own an Electronic Medical Records system (EMR), OZUIE can be used to broadcast

the results directly to the EMR. OZUIE provides hospitals with unlimited growth potential and flexibility and the ability to deliver a wide array of services.

□ **Web Based order entry and results**

Ordering physicians need a convenient, friendly, and time saving process to order laboratory tests and view the results. OZtech's Web based order entry and results system (OZWOER) utilizes OZUIE to interface with the hospital's LIS to create laboratory orders and to deliver the results. OZWOER enables physicians to order laboratory tests on-line, print requisition, and view the results. For improved efficiency, physicians can annotate the laboratory results and release the results for patient viewing; patient viewing is accomplished through OZtech's Web based Patient Self Help Portal. Based on ordering physician preferences alerts, in the form of emails or pages, can be set up to alert the physician when new results are available. Physician-defined alert rule can be setup based on a myriad of parameters such as patient name, laboratory test name, abnormality, priority, etc. Timely clinical alerts promote early intervention, leading to improved patient safety and quality of care. Integration of other productivity tools such as Medicare compliance system, to verify medical necessity based on Medicare rule and regulations, which can be extended to other provider, and print Advanced Beneficiary Notices (ABN), can improve financial performance and eliminate the need for manual verification. OZWOER prompts the ordering physicians when required information is missing, displays special instructions as needed, and transfers patient demographics and insurance to the LIS.

□ **Web Based Patient Self Help Portal**

Patient involvement in their care is increasingly becoming paramount in the delivery of healthcare. An important aspect of patient's involvement is the ability to access laboratory test results conveniently and at will, and to be able to communicate with their physician any questions or concerns they may have. OZtech's Web based Patient Self Help Portal (OZPSH) alerts patients when new test results, released by their physician, are available for viewing, and provides secure and convenient way for patients to access their laboratory results, current and past, and communicate with their physician as needed. OZPSH is also a patient health information portal, allowing patients to enter and store their health information such as medications, daily observations of glucose blood levels, blood pressure, weight, etc. The system can also generate physician-defined alerts when an observation needing immediate action is detected. Both patient and physician have access to the patient's health information.