

## Intelligent Medical Forms™ — A Bridge to EMR



### The Burden of EMR

Hospitals wishing to drive towards a complete and integrated electronic medical records (EMR) solution increasingly face overwhelming implementation challenges. For many hospitals, the show-stoppers are (a) the plethora of forms currently used to manage both clinical and administrative functions, and (b) the difficulties associated with migrating from a paper-driven workflows to an electronic environment.

Traditional medical record systems are typically built “from the ground up” and are centered around the essential elements of clinical data. However, more often than not the solution fails to adequately focus on the forms-driven nature and workflows of hospitals.

The result is a forced change in hospital workflow that encounters significant resistance from line staff producing disruption and an overall loss of productivity. It also leads to a sub-optimal hybrid structure consisting of a partially-

used-and-accepted electronic system, and paper forms that continue to flow through the enterprise the old fashioned way.

### Refreshing Approach

Intelligent Medical Forms (IMF) from BTI eliminates staff resistance and enhances productivity by adopting and automating existing processes. Unlike EMR products, IMF starts with the business-tested forms and workflows already in use in the hospital environment.

In most well-managed hospitals, these forms have been refined through years of careful development, approved by all relevant levels of management, and have proven their capacity to integrate seamlessly into the business of the enterprise. Other products seek to impose the developers’ (none of whom have ever run a hospital) notions of workflow on the management and line staff. IMF, in contrast, leverages the staff’s knowledge in running its business and adds field-proven information technologies to bring that busi-

ness into the 21st century.

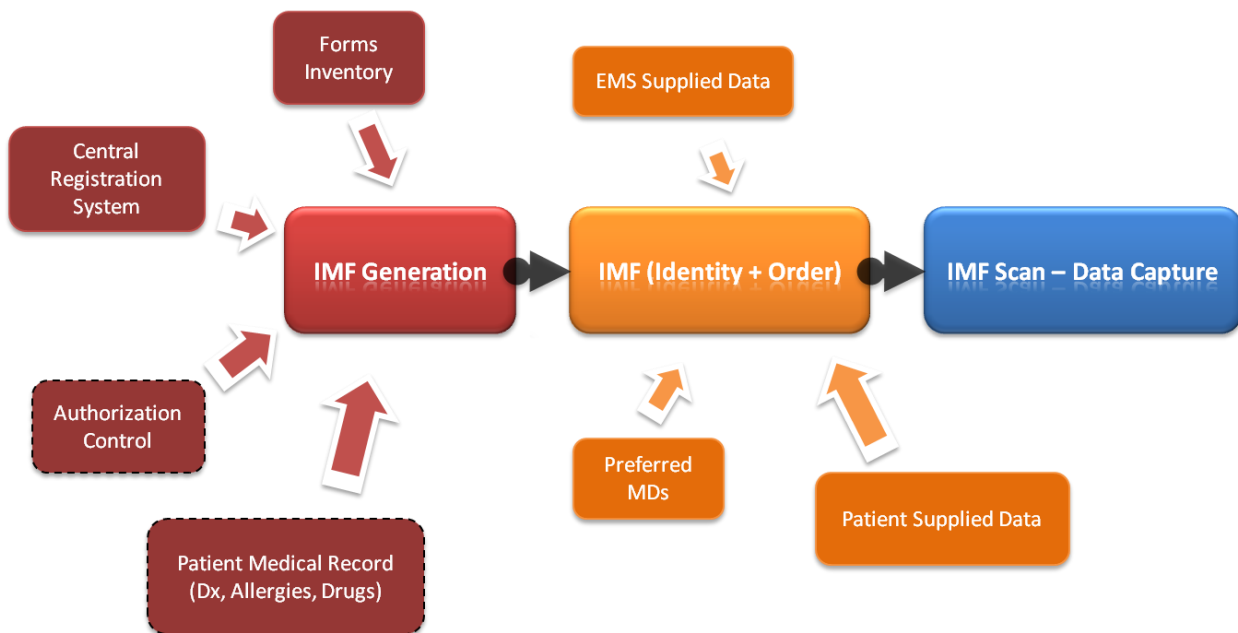
### Portable Data on Paper

Think of a form as the world’s first portable store. That may seem like a foolish concept in the era of enterprise data management, but the information on a form for centuries has conveyed essential elements of knowledge from one person to another (or many others).

The first major challenge with traditional paper forms is that filling in forms by hand is labor intensive and prone to errors and omission of critical information. The second major challenge is finding the right form at the right time. Finally, rolling out revised forms requires physically finding each and every copy throughout the hospital. Inevitably, older versions are missed and used which can create compliance issues.

With IMF, there is no reason to preprint forms. The most current, officially approved versions are centrally distributed to fill online or printed-then-filled, according to

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the preferences of the user. In either case, the form can be pre-populated with whatever information is already known to the enterprise including, patient name and demographics, caregiver information, diagnosis, treatment, and laboratory information, etc. Pre-population not only saves time but substantially reduces data entry errors.

Additionally, business rules behind the form can provide sophisticated field customizations and verifications during each step of the workflow, for example:

- Validate fields are entered correctly
- Required fields are completed
- Calculations are done automatically
- Make fields read-only and hidden based on user roles

Forms completed onscreen and then printed can also include a barcode containing some or all of the information on the form. In this manner, the bar code can be scanned to authenticate the paper form and sync data with another

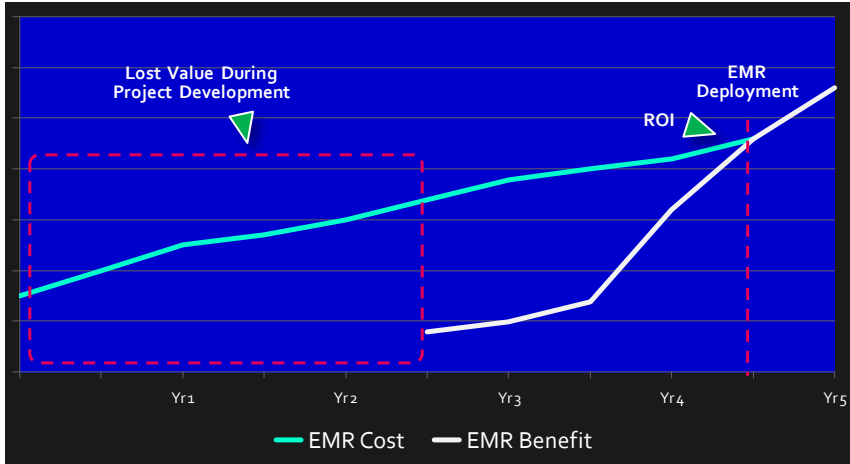
hospital system.

In today's world, a patient travels to Radiology with a paper chart and a hand-written requisition for a study. The Radiology department reads that information, enters it into the Radiology Information System, and proceeds to perform the study. Hopefully they got correct names of the patient and the referring physicians, and the correct procedure.

Using IMF, all of that information is generated on a bar coded form in the nursing station. All Radiology has to do is scan the form, just like an airline attendant scans a bar coded boarding pass. Similarly, patients coming for outpatient visits can access a web portal and complete all of their registration information before coming to the hospital for a scheduled procedure.

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## “Start with EMR” ROI Scenario



*Longer the project = higher cost and risk = postponed return on investment. Long development cycle may cause problematic integration with other new systems/applications deployed during the course.*

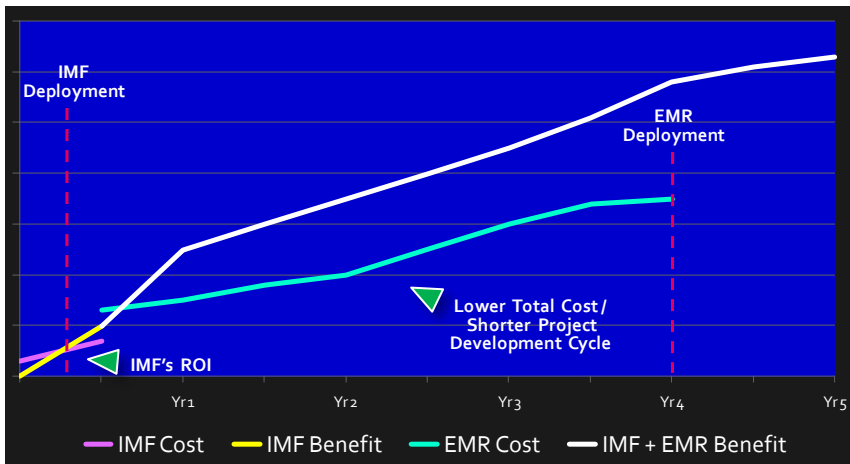
Implementing Electronic Medical Record (EMR) systems is a difficult, costly, and long term commitment. In addition, EMR development and testing can be disruptive to normal operations.

A typical EMR uses proprietary technologies and “IT centric” designs, instead of real-life hospital administrative and patient care workflows. As a result, EMR often duplicates the deficiencies of the clinical data-based medical record systems it replaces.

Current EMR systems tend to be inflexible “all-or-nothing” propositions that do not adapt easily to evolutionally changes in business requirements.

Finally, the return on EMR investment often eludes the organization for many years following the lengthy development process and roll-out.

## “Start with IMF” ROI Scenario



*Incremental improvement = speedy and accurate application delivery. Highly-focused phased approach guarantees rapid tangible ROI.*

BTI's Intelligent Medical Forms (IMF) provides a fully functional incremental step towards a significantly more cost-effective and flexible EMR.

IMF uses open-standard technologies that can integrate with existing and future hospital systems. IMF starts with business-tested forms that already drive hospital operations and automates organizational workflows already approved by management.

Additionally, IMF integrates with advance bar code technology to aid in HIPAA compliance and provides secure data portability even when the form is printed to paper.

Finally, IMF not only provides rapid, immediate benefits but also accelerates transition to fully functional EMR systems with substantially improved ROI.