



Implementing PMRI



Who Is Superior

- ◆ **Over 1000 professionals providing strategic visioning, advice, guidance and technical expertise for all aspects of healthcare IS to over 1900 clients.**



Which Protocol for PRMI

- ◆ **Depends. If addressing just PRMI and not other data issues then HL7.**
- ◆ **HL7 version 2.x has become the de facto standard for electronic data exchange between systems providing patient care both intra and inter-facility.**



Why

- ◆ **Pre HL7 Integration**
 - **No integration standard**
 - **Point-to-point**
 - **Vendor proprietary fixed length, fixed field flat record messages**
 - **Adding new data requires customization**
 - **Support and maintenance issues**
 - **Extensive knowledge of each system**



HL7 Benefits

- ◆ **Industry Standard**
- ◆ **Widely accepted and implemented**
- ◆ **Vendor Supported**
- ◆ **Customizable – New Segments and Fields**
- ◆ **Dynamic length**
- ◆ **Forwards compatible**
- ◆ **Most mature of the standards**



Which HL7 Version

- ◆ **Most implementations are version 2.2**
- ◆ **No business incentives to migrate to later releases**
- ◆ **Later versions added segments and fields to address data not defined in earlier versions**
- ◆ **However, facilities addressed undefined data with custom segments and fields**
- ◆ **If it's not broke, don't fix it**
- ◆ **Y2K did not force HL7 version changes**



Issues

- ◆ **Location for some data is open for interpretation**
- ◆ **Lack of standardization of field values for facilities and groups**
- ◆ **Not fully integrated by the vendors**
- ◆ **Still evolving for specialty issues**



Time to Implement

- ◆ **Function of vendor system, vendor spec., transaction type and knowledge**
- ◆ **Simple interfaces 120 – 200 man hours to implement and test on an interface engine. More if others systems must be modified**
- ◆ **More complex 500 + man hours**



Cost to Implement

- ◆ **Varies on the number of systems, interfaces and customization**
- ◆ **Lack of skilled integration staff. Even the most prestigious facilities use consultants to implement major projects.**
- ◆ **Facilities use own staff for maintenance and small projects.**
- ◆ **Interface engines centralizes the knowledge but has a high entry cost**



Later HL7 Versions

- ◆ **Add new segments and fields mainly to address specialty issues**
- ◆ **Version 2.4 added breed and species fields but only benefits veterinarians**



HL7 and XML

- ◆ **A simple XML implementation of HL7 would allow position independent data.**
- ◆ **Is there enough business incentive to move quickly to this?**
- ◆ **Probably Not.**



Cost of New Standard

- ◆ **Rough estimate:**
 - \$250,000 per medical facility**
 - for interface engine**
 - 6,000 facilities**
 - \$1.5 billion**
- ◆ **Does not include practices, payers, vendors or supply chain**
- ◆ **Cost rises exponentially when these systems are considered**



Other Cost Consideration

- ◆ **Training and learning curve cost**
- ◆ **Mandates integration retest of every function of every system**
- ◆ **Two year implementation window with current skilled resources may not be realistic**
- ◆ **Procrastination by facilities will be an issue**



Recommendation

- ◆ **To control cost keep current 2.x standards**
- ◆ **Add transactions, segments and fields address issues not currently handled**
- ◆ **Define standard field values across systems and facilities**
- ◆ **Add a voluntary migration path to a HL7 version 2.x XML schema. Current draft does not address all of the issues.**