

Review of and Response to the Top 15 Priorities on the Physician/Nurse PSG Prioritized Functionality List

1. ***PCC Encounter Form that Allows Immediate Billing*** Develop a turn around document that provides a summary bill by the time the patient leaves the office. It would include subjective/objective, labs, procedures, assessment, plan, etc. The form should be customizable to type of visit, provider discipline, etc. The form should have all the essential information to produce a bill and should prompt additional services appropriate to the visit.

<i>Feasible with existing data standards/technology/local infrastructures?</i>	<i>Yes</i>
<i>HQ level of effort (\$/time) required to address (5=lots, 1=minimal)</i>	<i>5</i>
<i>Area/local level of effort (\$/time) required to address (5=lots, 1=minimal)</i>	<i>5</i>
<i>Overlap with highest priorities of other groups, e.g., business office, admin., etc.? (5=lots, 1=minimal)</i>	<i>5</i>

Comments Ties in with our need to better capture billing, reduce redundant entry between the PCC encounter form and a superbill, improve accuracy, etc.

Activities/projects addressing this function We are contracting with Informatix Laboratories Corporation to produce such a form. Their new encounter form is being alpha tested at San Bernardino, Crow, and Warm Springs, and soon will be implemented at Gallup.

Additional action needed None at this point.

2. ***Electronic Interface between Contract Labs and PCC*** Develop interfaces between the PCC Lab Package and the most widely utilized reference labs so that reference lab results can be electronically entered into the PCC.

<i>Feasible with existing data standards/technology/local infrastructures?</i>	<i>Somewhat</i>
<i>HQ level of effort (\$/time) required to address (5=lots, 1=minimal)</i>	<i>5</i>
<i>Area/local level of effort (\$/time) required to address (5=lots, 1=minimal)</i>	<i>5+</i>
<i>Overlap with highest priorities of other groups, e.g., business office, admin., etc.? (5=lots, 1=minimal)</i>	<i>3</i>

Comments This would reduce costs and errors related to manual entry of outside labs, increase clinical availability of this data, allow better cost accounting reports, etc. Unfortunately although there are reasonably uniform message standards – HL7 - there are no uniform standards for the terminology – test names, results, units, etc. In addition each site has its own unique lab test file. Thus custom interfaces to the various proprietary reference lab systems would have to be programmed at each individual site which is extremely costly. There is also a significant maintenance cost in that programming will be required for the custom interfaces to accommodate each new test. These difficulties will be greatly ameliorated if LOINC terminology standards are implemented at both ends.

Activities/projects addressing this function Aberdeen has set up an interface between their hospital and a small reference lab (Pathology Associates) and Rapid City and is beginning to implement it throughout Aberdeen Area. This implementation uses standard HL7 messages, but requires custom interfaces with individual lab test files at each facility. Billings Area has been considering building similar interfaces with their reference lab, APL. ITSC is in the process of contracting the mapping of a standard lab test file to LOINC terminology standards and plans to subsequently develop a tool that would facilitate local sites' need to, in turn, map their individual lab files to LOINC.

Additional action needed In addition, ITSC is considering setting up the reference lab side of an interface with two of the largest reference labs, Quest and APL. This would still require customization at each individual local site and ongoing maintenance of that customization.

3. **Customizable PCC Encounter Forms** Develop a system that can produce patient, provider, clinic, and/or facility specific PCC encounter forms when the patient comes to a facility for a healthcare service. These forms will allow customization so that only data entry sections, check boxes, etc. appropriate to that specific patient, provider, clinic, and/or facility will appear on the encounter form.

<i>Feasible with existing data standards/technology/local infrastructures?</i>	<i>Yes</i>
<i>HQ level of effort (\$/time) required to address (5=lots, 1=minimal)</i>	<i>4</i>
<i>Area/local level of effort (\$/time) required to address (5=lots, 1=minimal)</i>	<i>5+</i>
<i>Overlap with highest priorities of other groups, e.g., business office, admin., etc.? (5=lots, 1=minimal)</i>	<i>4</i>

Comments Will improve accuracy of data recording and entry resulting in better data for clinical use, billing, cost accounting, GPRA and other outcome measurements, etc.

Activities/projects addressing this function We are contracting with Informatix Laboratories Corporation to produce such a form. Their new encounter form is being alpha tested at San Bernardino, Crow, and Warm Springs, and soon will be implemented at Gallup.

Additional action needed None at this point.

4. **A. Multi-path Turn-Around PCC Encounter Form** Develop a method to allow providers to order meds, labs, referrals, studies from the same form and develop a method to allow that form to be simultaneously transmitted to multiple sites (e.g., billing, pharmacy, lab, etc.).

<i>Feasible with existing data standards/technology/local infrastructures?</i>	<i>Yes</i>
<i>HQ level of effort (\$/time) required to address (5=lots, 1=minimal)</i>	<i>5</i>
<i>Area/local level of effort (\$/time) required to address (5=lots, 1=minimal)</i>	<i>5+</i>
<i>Overlap with highest priorities of other groups, e.g., business office, admin., etc.? (5=lots, 1=minimal)</i>	<i>4</i>

Comments By enabling encounter information to be simultaneously routed along multiple paths in real-time, business processes can be made much more efficient. For example, this can result in more prompt billing, less delay in filling of prescriptions or obtaining lab samples, etc. Required technology to allow this is still investigational.

Activities/projects addressing this function We are contracting with Informatix Laboratories Corporation to test a new Integrated scanning technology at Crow that has the promise of providing this functionality.

Additional action needed None at this point.

B. Point of Care Data Entry Alternatively, develop true point of service data entry mechanisms to allow elimination of the paper form, e.g., handheld units, portables with IR ports, voice recognition software, etc.

<i>Feasible with existing data standards/technology/local infrastructures?</i>	<i>Yes, in selected situations</i>
<i>HQ level of effort (\$/time) required to address (5=lots, 1=minimal)</i>	5+
<i>Area/local level of effort (\$/time) required to address (5=lots, 1=minimal)</i>	5++
<i>Overlap with highest priorities of other groups, e.g., business office, admin., etc.? (5=lots, 1=minimal)</i>	4

Comments Although this technology is viable in selected processes (RCIS, pharmacy, lab, radiology, CHRs) it is not yet feasible across the entire enterprise - for all processes throughout the facility in all facilities in our system. The demands on local information infrastructures to support this level of hardware and software will be especially daunting.

Activities/projects addressing this function ITSC is committing to pursue pilot testing individual niche and more global solutions (e.g., Chartware, IHS Patient Chart, VA CPRS, VA Vistation, palm pilot applications, etc.) at selected sites for selected processes.

Additional action needed ITSC needs to continue to encourage and facilitate pilots of these potential solutions as promote sharing experience derived from these pilots at its annual Tech Fair and through other venues.

5. **Electronic Signatures** Develop an electronic signature as a means to guarantee the authenticity of a set of input data and even document data review the same way a written signature verifies the authenticity of a paper document.

<i>Feasible with existing data standards/technology/local infrastructures?</i>	<i>Yes</i>
<i>HQ level of effort (\$/time) required to address (5=lots, 1=minimal)</i>	5
<i>Area/local level of effort (\$/time) required to address (5=lots, 1=minimal)</i>	3
<i>Overlap with highest priorities of other groups, e.g., business office, admin., etc.? (5=lots, 1=minimal)</i>	4

Comments A rudimentary electronic signature is already a part of ARMS. A more sophisticated module will be needed to comply with the more stringent HIPPA requirements. Sophisticated technologies, such as biometrics, are probably not feasible at most local sites and would require considerably more resources at the Area and HQ levels.

Activities/projects addressing this function A scope of work has been written to develop an electronic signature capability as part of the Navajo Area's Lab Enhancements Contract Package. As of the date of this report, ITSC is awaiting transfer of funds so that the contract can be awarded. As part of the GCPR project, we are investigating more sophisticated modules that would comply with the more stringent HIPPA requirements.

Additional action needed Once this functionality is developed as part of the Navajo Area contract or GCPR, ITSC will need to utilize it in other packages, as appropriate.

6. ***Integrated Superbill/Health Summary/PCC Encounter Form*** Develop a "super" PCC encounter form that integrates the current PCC encounter form, superbill, and patient specific health summary information into one, non-redundant data entry form.

<i>Feasible with existing data standards/technology/local infrastructures?</i>	<i>Yes</i>
<i>HQ level of effort (\$/time) required to address (5=lots, 1=minimal)</i>	<i>5</i>
<i>Area/local level of effort (\$/time) required to address (5=lots, 1=minimal)</i>	<i>5+</i>
<i>Overlap with highest priorities of other groups, e.g., business office, admin., etc.? (5=lots, 1=minimal)</i>	<i>5</i>

Comments See priority #1.

Activities/projects addressing this function See priority #1.

Additional action needed See priority #1.

7. ***Electronic Signatures in Lab Package*** Modify the PCC lab package to capture the electronic signature of the clinician and the date documenting that he/she has reviewed a particular result. Include an alert that will prompt a clinician upon user sign-on to RPMS indicating that he/she has laboratory results that require review. Allow the clinician to pull-up all unreviewed laboratory results, either "by patient" or "by clinician".

<i>Feasible with existing data standards/technology/local infrastructures?</i>	<i>Yes, in selected situations</i>
<i>HQ level of effort (\$/time) required to address (5=lots, 1=minimal)</i>	<i>5</i>
<i>Area/local level of effort (\$/time) required to address (5=lots, 1=minimal)</i>	<i>3</i>
<i>Overlap with highest priorities of other groups, e.g., business office, admin., etc.? (5=lots, 1=minimal)</i>	<i>4</i>

Comments See priority #5.

Activities/projects addressing this function See priority #5.

Additional action needed See priority #5.

8. ***Integrated Flow Charts/PCC Encounter Forms*** Develop additional encounter forms that both allow the entry of encounter data while also prompting for specific standards of care. Examples of forms that do this well are the PCC Well Child Form and certain non-PCC prenatal forms. Maintain documentation of the references for a specific flow chart (e.g., USPSTF, AHRQ, AAFP, AAP, etc.).

<i>Feasible with existing data standards/technology/local infrastructures?</i>	<i>Yes, in selected situations</i>
<i>HQ level of effort (\$/time) required to address (5=lots, 1=minimal)</i>	5
<i>Area/local level of effort (\$/time) required to address (5=lots, 1=minimal)</i>	5+
<i>Overlap with highest priorities of other groups, e.g., business office, admin., etc.? (5=lots, 1=minimal)</i>	3

Comments Agree. Development of additional forms would improve data recording and entry, thus the accuracy of data. By displaying data in an easier to understand fashion and by prompting for recommended services, they would likely improve quality of care. The level of effort on the program side of our organization (rather than ITSC), however, will be significant in that the forms will need to be researched, a consensus achieved, and then the specifics of the form developed before ITSC could utilize them in our systems.

Activities/projects addressing this function As part of Informatix Laboratories Corporation's Crow encounter form pilot they have developed a new diabetes encounter form that includes two new elements: a flow chart and graphs. Initial response from clinicians has been very positive. Other forms they are considering for this treatment include field health and ER

Additional action needed Ask Chuck North, Al Waxman, and Mary Kihega, or their designees if they would be willing to work on a prenatal flow chart/encounter form. As a next step would like to see them work with Informatix Laboratories Corporation to use their encounter form product to turn this into a full-fledged turn-around document, including appropriate graphs (e.g., BP and weight by gestational age).

9. ***Scanned Textual Data Entry*** The system needs the capacity to scan documents from other institutions and file them in the electronic record. This will improve retrieval and referral mechanisms.

<i>Feasible with existing data standards/technology/local infrastructures?</i>	<i>Yes, in selected situations</i>
<i>HQ level of effort (\$/time) required to address (5=lots, 1=minimal)</i>	5
<i>Area/local level of effort (\$/time) required to address (5=lots, 1=minimal)</i>	5+

<i>Overlap with highest priorities of other groups, e.g., business office, admin., etc.? (5=lots, 1=minimal)</i>	2
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Comments The VA Imaging Package, implemented in Alaska allows the storage of text-based images, but places do not exist within RPMS to appropriately categorize, store, or display many of these types of reports. There would need to be a significant local investment to support this functionality.

Activities/projects addressing this function The GCPR project will be modeling text-based reports and our clinical representative to that group is Tim Mayhew.

Additional action needed To be determined based upon the recommendations coming out of the GCPR Text-Based Reports partition.

10. Customizable Medication List that Can be Defined and Maintained by Individual Providers

Develop a new medication component to the Health Summary that allows providers to create and maintain a customized list of medications that could not easily be created from automated logic. For example, a provider could choose to include on this list current medications, a list of discontinued medications (including the reason for discontinuation), all meds that were being used or had previously been used for a condition (e.g., HIV or TB meds), etc.

<i>Feasible with existing data standards/technology/local infrastructures?</i>	<i>Yes, in selected situations</i>
<i>HQ level of effort (\$/time) required to address (5=lots, 1=minimal)</i>	5++
<i>Area/local level of effort (\$/time) required to address (5=lots, 1=minimal)</i>	5+
<i>Overlap with highest priorities of other groups, e.g., business office, admin., etc.? (5=lots, 1=minimal)</i>	3

Comments Right now such a list can be maintained through a combination of the current medication modules, problem list entries, and problem notes, but this would allow a provider to consolidate this information all in one place. It would involve setting up new mechanisms for data entry and well as the database files and fields to store this information and the additional changes required to be able to report them (modifications to Health Summary, Qman, PGEN, and Management Reports).

Activities/projects addressing this function Will discuss with Cimarron whether or not this is feasible and how much it might cost to develop such a module and then report back to the PSG.

Additional action needed None pending the above.

11. Knowledge Couplers 1. Implement a drug interaction knowledge coupler in the Pharmacy package; 2. Make medical references such as Iliad, the Washington Manual,

Sanford's Infectious Diseases pocket reference, etc. electronically available in the clinic;
3. Make the IHS standard Patient Education Protocols electronically available.

<i>Feasible with existing data standards/technology/local infrastructures?</i>	<i>Yes, in selected situations</i>
<i>HQ level of effort (\$/time) required to address (5=lots, 1=minimal)</i>	<i>Depends</i>
<i>Area/local level of effort (\$/time) required to address (5=lots, 1=minimal)</i>	<i>3</i>
<i>Overlap with highest priorities of other groups, e.g., business office, admin., etc.? (5=lots, 1=minimal)</i>	<i>3</i>

Comments Context sensitive knowledge couplers depend upon point of service data entry while stand-alone products do not. The stand-alone products are commercially available in various forms (internet, CDROM, etc.) and we would likely not develop them internally. Local sites can and should set up CDROM servers and Internet portals in the clinic since the technology to do that is readily available, essentially anywhere. Since we lack complete point of service data entry, the more system-wide context sensitive applications aren't feasible. Application specific ones in those instances where we do utilize point of service data entry (pharmacy, lab results, etc.) are feasible and should be considered.

Activities/projects addressing this function We will pass on a recommendation that the Pharmacy PSG consider implementing a drug interaction knowledge coupler in the Pharmacy Package. We have recommended in the past (and will do so again) that the IHS HQ Patient Education Consultant establish a web page on the IHS web site and publish the standard protocols on that site.

Additional action needed None at this point.

- 12. RPMS Applications Interoperability** Evaluate current interoperability of RPMS products, and then take steps to ensure that all applications are linked, wherever possible. In particular, look at the Women's Health Package to see if it is linked as well as it might be.

<i>Feasible with existing data standards/technology/local infrastructures?</i>	<i>Yes, in selected situations</i>
<i>HQ level of effort (\$/time) required to address (5=lots, 1=minimal)</i>	<i>?</i>
<i>Area/local level of effort (\$/time) required to address (5=lots, 1=minimal)</i>	<i>?</i>
<i>Overlap with highest priorities of other groups, e.g., business office, admin., etc.? (5=lots, 1=minimal)</i>	<i>3</i>

Comments I do not have a great deal of personal experience with the Women's Health Package and so need to research this further.

Activities/projects addressing this function I am in the process of contacting local experts in this package to evaluate the scope of the problem.

Additional action needed Pending results and conclusions from this initial evaluation.

- 13. OB/ER/Surgical Logs** Need the ability to enter, store, search and retrieve information required by HCFA and other regulatory organizations. This information is currently entered manually into large ledger books. Logs required include Labor and Delivery, Emergency Visits, Surgeries. Data required vary depending on area of service.

<i>Feasible with existing data standards/technology/local infrastructures?</i>	<i>Yes, in selected situations</i>
<i>HQ level of effort (\$/time) required to address (5=lots, 1=minimal)</i>	4
<i>Area/local level of effort (\$/time) required to address (5=lots, 1=minimal)</i>	5+
<i>Overlap with highest priorities of other groups, e.g., business office, admin., etc.? (5=lots, 1=minimal)</i>	4

Comments The VA has ER and Surgical Packages which have been implemented at ANMC. I am not certain whether or not whether anyone has implemented any kind of an OB log. I will need to research this further.

Activities/projects addressing this function I am in the process of contacting local experts in this package to further evaluate these packages.

Additional action needed Pending results and conclusions from this initial evaluation.

- 14. GUI Interface for Direct Problem List Editing** Develop the capability for providers to directly view and edit a patient's problem list from a GUI and/or Web-type interface

<i>Feasible with existing data standards/technology/local infrastructures?</i>	<i>Yes, in selected situations</i>
<i>HQ level of effort (\$/time) required to address (5=lots, 1=minimal)</i>	5
<i>Area/local level of effort (\$/time) required to address (5=lots, 1=minimal)</i>	5+
<i>Overlap with highest priorities of other groups, e.g., business office, admin., etc.? (5=lots, 1=minimal)</i>	4

Comments This functionality already exists with the RPMS's IHS Patient Chart Application, although some needs identified in early alpha testing need to be addressed (e.g., not sending minor textual changes back to the coders) before it goes to beta.

Activities/projects addressing this function RPMS's IHS Patient Chart.

Additional action needed Re-start the alpha test (has not been aggressively tested at the alpha test sites yet). If sites agree to actively alpha test this function, identify and commit a programmer to resolve identified issues prior to beta. Once alpha testing is complete, distribute for beta testing at selected sites.

- 15. Web-based Access** Make RPMS data accessible via the web while assuring that appropriate security and confidentiality requirements are met.

<i>Feasible with existing data standards/technology/local infrastructures?</i>	<i>Yes, in selected situations</i>
<i>HQ level of effort (\$/time) required to address (5=lots, 1=minimal)</i>	<i>5</i>
<i>Area/local level of effort (\$/time) required to address (5=lots, 1=minimal)</i>	<i>5+</i>
<i>Overlap with highest priorities of other groups, e.g., business office, admin., etc.? (5=lots, 1=minimal)</i>	<i>4</i>

Activities/projects addressing this function ITSC has contracted with SAIC to adapt a VA application (WebTop) to provide this functionality. Tim Mayhew is providing programmatic guidance to this project. The product is scheduled to begin alpha testing at Crow and Lame Deer in November.

Additional action needed None at this point.