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**Results of the Avatar Implementation Evaluation at Mental Health Center of Denver:
Summary Results from Two Follow-up Surveys
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Project Purpose: To monitor progress towards a successful implementation of Avatar by Information Systems.

Methods: Staff at the Mental Health Center of Denver (MHCD) were asked to anonymously complete follow-up surveys at 6-months and 12-months after the implementation of Avatar. 139 staff completed the 6-month follow-up survey and 210 staff completed the 12-month follow-up survey.

Question: *Compared to the preceding three months, does Avatar feel more useable during the last quarter?*

	6-month follow-up		12-month follow-up	
	Count	%	Count	%
Yes. Much more useable.	15	15%	40	26%
Yes. Somewhat more useable.	58	57%	81	52%
No. It feels about the same	25	25%	31	20%
No. It is worse now.	3	3%	3	2%
Total	101	100%	155	100%

Analysis: More than three-quarters (78%) of MHCD staff believe that Avatar has become more useable over the past 6 months, up from 72% at the 6-month follow-up, indicating a steady rise in users' perceptions of Avatar usability.

Question: *Which areas for Avatar development would you like to see more priority given to?*

(Average rating across all respondents with rating scale of 1 to 3, where 1 = Lowest, 2 = Moderate, 3 = Highest Priority)

	6-month follow-up	12-month follow-up
Workflow/Form Simplicity (CCAR, Intake, Treatment Planning, etc.)	2.49	2.46
Minimization of Errors & Improved Stability	2.53	2.40
Information Retrieval (Scanned Documents, Chart Review, Appointment History, etc.)	2.35	2.35
Progress Summary Improvements	2.14	2.06
Reminder System (Task List, To Do List, Email notifications)	2.21	1.99
Help/Training Guides	1.76	1.73

Analysis: MHCD staff continue to rank "Workflow/Form Simplicity" as the Highest Priority area for further Avatar Development. A decrease in average rating for most of the categories indicates a decrease in the feeling that everything is the highest priority. The decrease in average rating for "Minimization of Errors" and "Reminder System" are likely the result of prioritized enhancements that addressed these areas during the six months between follow-up surveys.

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Question: *On a scale of 1 - 100, how would you rate the "completeness" of Avatar as a fully developed electronic health record?*

	6-month follow-up	12-month follow-up	Gain:
Avatar Completeness Rating (average):	48	56	+8

Analysis: Staff rating of "Avatar Completeness" has climbed 8 points in last 6 months. A "completeness" rating of only 56 indicates that there is still a way to go to before users believe that Avatar is a fully developed electronic health record. However, the goal should not be to reach an average rating of 100 on this scale, as it may be impossible to get all users to feel that the EHR is ever fully developed.

Question: To what degree do you agree/disagree with the following statement: *Our electronic health record (STAR/AVATAR) is easy to use and document services.* (Favorability was calculated by combing "Strongly Agree" and "Agree" responses.)

	Baseline Rating of STAR - June 2015	6-month follow-up	12-month follow-up
Percent (%) Favorable:	30	29	39

Analysis: Staff feel that twelve months after implementation of Avatar, it is easier to use and document services than STAR was in June 2015, just prior to implementation of Avatar. The 9 percentage point increase is a statistically significant increase, indicating that enhancement made to Avatar in the last six months have made Avatar easier to use for staff. However, 61% of staff still do not feel that Avatar is easy to use and document services (ratings of either neutral or unfavorable). While it is unreasonable to expect that all staff will ever feel favorable towards the electronic health record, it is reasonable to expect that the favorable rating will increase over time with continued efforts to improve and enhance Avatar.

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Solicitation of Input for Avatar Enhancements

A number of strategies have been deployed by the Information Systems department to solicit input into the development of enhancement to Avatar during the first year of implementation. Here is a list of those strategies:

Strategies for Enhancement Solicitation and Prioritization	Organizational Participants
Monthly executive prioritization meeting	Executives, Directors, and/or Other Appointed Delegates
Weekly show & tell	Super Users and Other Stakeholders (Open to all staff)
Monthly visits to program managers	Program Managers
Avatar Idea Box	All Staff
Help Desk Submissions	All Staff

MHCD Staff have contributed numerous ideas for enhancements to Avatar over the first year via the channels outlined above, many of which have led to important enhancements to Avatar. More than 575 ideas have been submitted to the Avatar Idea Box, resulting in enhancements such as:

- Creation of the Information Only/Missed Visit note
- Field pre-populations on the CCAR
- Collection of Emergency Contact and Medical Decision Maker information and display of information on contacts widget
- Update of treatment plan reports to match the rest of the agency reports

Most recently, staff submitted 163 ideas in response to questions asked during the 12-month follow-up survey: “What ideas do you have for making Avatar help you do your work even better” and “What ideas do you have for where Avatar could do more to help you provide treatment to the people we serve”. Here are how those ideas are being prioritized by the Information Systems department:

Avatar Features Requested	MHCD Application Development Queue			Netsmart Avatar Development		Not Feasible	Total
	Top 25	25+	Not in queue	In Queue	Not in Queue		
<i>Summary of Qualitative Coding, Classification, & Prioritization</i>							
Input Information	7	2	3	4	3	2	21
Retrieve Information	10	6	2	2	0	1	21
View System-level Information	1	8	8	3	0	0	20
System Performance Optimization	0	0	2	0	7	0	9
Workflow	4	8	1	4	6	3	26
Practice Management Improvements	0	0	3	0	0	0	3

Analysis: A majority of features requested in the 12-month follow-up survey were already included and prioritized for development (in other words, inclusion in the columns “Top 25”, “25+”, for MHCD App Dev Queue, and “In Queue” for Netsmart Development) indicating that the current channels for soliciting input about how to more fully develop Avatar are working as

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intended. However, improvements to communicate broadly to all staff what is included in the prioritized Avatar development queue is recommended in order close the communication loop in letting staff know that their input is being heard. (For further details on the qualitative analysis, see the report [here](#).)

Summary Analysis and Recommendations

While users' experience of Avatar has steadily improved over the first year of implementation, there remains a need for improving the usability and completeness of the EHR. While 100% satisfaction with Avatar is realistically unattainable, setting some stretch goals in terms of target metrics that are achievable in the next six to twelve months should be taken into consideration.

Current Information System's strategies to collect input for, feedback on, and prioritization of Avatar enhancements has led to prioritized development queues for MHCD Application Development and Netsmart Development that will enhance Avatar Users' Experience. However, frontline staff may not always feel that their ideas and suggestions are heard or that their input has an impact on the prioritization of enhancements, leading to feelings of disenfranchisement. Therefore, it is recommended that efforts be made to create more transparency and more opportunities for input from frontline staff in the Avatar enhancement development process.

Building upon past successes, it is recommended that efforts be devoted to conducting Avatar User Analyses with target groups that have received the least attention in building out the Avatar product to meet their needs. (For summaries of completed Avatar User Analyses – [Nursing Staff, Outpatient Therapists](#).) After participating in the Avatar User Analysis, staff expressed their gratitude for having the opportunity to provide input and felt like this process allowed their voices to be heard.

Application Development Roadmap: *What you can expect to see in the upcoming months.*

- An Avatar User Analysis is currently being conducted with the Billing and Accounts Receivable department, with planned projects with Front Desk and Residential staff by the end of the year.
- Scanned documents and STAR documents will soon be viewable from within Avatar, eliminating the need to view documents in two separate systems.
- A new Progress Notes Viewer is being created to allow retrieval of progress notes based on certain filtered criteria. This will allow staff to view all notes, including Information Only/Missed Visit Notes, from a single entry point. Filters will likely include episode (or across all episodes), note type, service code, et cetera.
- A method to streamline injection notes for nurses is being created to remove the duplication of notes from their current workflow.
- Efficient and expedient development of Avatar Enhancements by MHCD Application Development and Netsmart Development teams.
 - Interested in digging into the details? Here are the development queues to satisfy your curiosities:
 - [MHCD Application Development Prioritized List of Top 25 Avatar Enhancements](#)
 - [Netsmart's Avatar Development Queue – Top 20 Development Projects](#)
- Periodic re-examination of the ongoing Information Systems communication strategies in an effort to identify gaps and improve transparency.