**MedStar ID's with multiple completed calls**

* Many MedStar ID's have more than one record in the MDAC data. That is expected. The protocol is for MDAC to call each person more than one time if they can't complete the call the first time. However, there are a small number of MedStar ID's that have multiple *completed* calls (e.g., 69967 and 0deb0). That is *not* expected. We need to make sure that the data we process and upload to FM Pro contains only one completed call per MedStar ID.
  + 69967: outbound call result CO on 10/20/21; inbound call result 72 (soft refusal) on 2/25/22 18:56:59; phone 4146983259; two records with this phone number, medstar ID 69967 and 690f3. 690f3 had outbound call on 2/25/22 18:55:33 with result 40 (answering machine), then another outbound call on 3/3/22 with result 71 (hard refusal).
    - What happened here is: As we know, we are loading multiple records with the same phone number, over time. When we load new records, we are deactivating the old records, which prevents further outbound calls on those records; however, that does not stop inbound calls from auto-matching to them. When an inbound call comes in, the system first tries to match it to a record with the same phone number. If it can’t fine one, then the interviewer can search and select the record (by name, or phone number). So here, the first record, 69967, resulted in a complete from an outbound call on 10/20/21. Then, a second record with the same phone number, 690f3, was loaded, and an outbound call was made on 2/25/22 which resulted in an answering machine. The respondent called us back, but the system matched it to the original record, which is why there is a second call on that record after the complete. This second call resulted in a soft refusal. However, since that soft refusal was on the first record, that means the second record was still dispositioned as “answering machine” and in the queue for another outbound call attempt, which was made on 3/3/22 and resulted in a hard refusal (understandably).
  + 0deb0: outbound call result 98 (not eligible) on 11/30/21; inbound call result 01 (callback) 3/5/22 13:18:06; phone 8177232194; two records with this phone number, medstar ID 0deb0 and d3749; d3749 had outbound calls on 2/22/22, 3/1/22, and 3/5/22 13:11:25, all results 40 (answering machine).
    - Also, two records with same medstar ID d3729, with different phone number and name. Second record for d3729 (phone 8179220893) had one outbound call on 6/16/22 result 72 (soft refusal)
    - So, the same thing happened with this record, where we had already dispositioned the case as “not eligible”, but then made calls on a separate record with the same phone number, and then received an inbound call which auto-matched to the original record.
  + In conclusion, it looks like we might have to accept this situation may occur occasionally, and it just comes with the territory of having multiple records in the system with the same phone number (which is not standard practice).
  + Additionally, I have to ask what exactly you mean when you say “multiple completed calls”. For each of the above examples, I only see one call attempt (or none) that resulted in a “complete” disposition.
* These MedStar ID's with multiple completed calls were also one source of the problem we had with our MoCA scores not matching MDAC's MoCA scores.
  + See explanation above.
* For most "normal" MedStar ID's (i.e., MedStar ID's with one or fewer completed calls), it looks like our MoCA scores match yours now. This is great! Having said that, who knows what might come up in the future. You previously mentioned something about adding additional columns to future data sets that would allow us to more easily see exactly how the final MoCA score is calculated on your end. I would appreciate those columns being added if you are still willing to do so.
  + I will accomplish this as soon as I am able, and let you know once the changes have taken effect. I will also provide an updated data dictionary.

**Systematically checking call logs for MedStar IDs with multiple completed calls**

* I also want us to look for a way to systematically check for MedStar IDs with multiple completed calls when we process future data sets for FM Pro.
* My first thought was that we would want to use resCodeResult to filter out cases with multiple completions. However, when reviewing known cases with multiple completions (e.g., 69967 and 0deb0) resCodeResult wasn't marked complete in all rows (any rows in the case of 0deb0).
  + For 69967:
    - resCodeResult = CO (Complete) and SCORE = 17
    - resCodeResult = 72 (Soft refusal) and SCORE = 13
    - Why do they have a score if they refused?
      * See explanation above re: inbound calls. The 72 was from an inbound call that occurred after the complete. The score remains on all lines representing individual call attempts in the call history export. The presence of a score doesn’t imply the score was calculated during that particular call attempt.
      * Also, when I look at the export, I see a consistent score of 17 on both lines, which makes sense. Where are you seeing the 13? That would not make sense to me and I would definitely need to investigate.
    - Also, the first call date was 2021-10-20 and the second call date was 2022-02-25. Why the big gap?
      * See explanation above regarding inbound calls.
  + For 0deb0:
    - resCodeResult = 98 (Not Eligible) and SCORE = 14
    - resCodeResult = 1 (Continue) and SCORE = 14
    - Why do they have a score if they were not eligible?
      * A result of 98 indicates not eligible based on the score. In other words, the respondent is not eligible for the follow-up visit because the scored less than a 17. So the score is calculated before the disposition of 98 is issued.
* Additionally, there are 73 MedStar IDs with a MoCA score, but no CaseResult that equals complete. Is that expected?
  + Yes. A disposition of “complete” indicates the respondent was scheduled for a follow-up visit. So, if they were scored but did not score high enough, then they were not scheduled for a follow-up visit and therefore are not a “complete”. This is before we changed the protocol to not use the score as a factor in determining eligibility for the follow-up visit. Irrespective of the change in protocol, however, they respondent could still refuse the follow-up visit, in which case the call would be dispositioned as a “97 – refused follow-up”.

**Moving forward**

I'm sure you are busy with the holidays, but if you could take a stab at answering the questions above when you get back, I would appreciate it. Additionally, I would appreciate some ideas about how we can potentially systematically check for MedStar IDs with multiple completed calls. If you would prefer to have a virtual meeting, that's totally cool with me.

Although it is less than ideal to have calls showing up on a record after it has been dispositioned in such a way as would have us expect no further calls to occur, like I mentioned earlier it may just be something we have to live with given the non-standard nature of this project, with duplicate phone numbers being loaded over time as distinct records. An additional challenge here, is that we are deactivating sample as we load new sample. We sometimes receive an inbound call on a record that has been recently deactivated because we have loaded the next sample file. In these cases, often we want to be able to access that record and some of those have resulted in completed interviews. However, because we want to be able to access deactivated records *some of the time*, it becomes difficult to manage specific scenarios whereupon we would be blocked from accessing a record, such as in the examples above. I am looking into this further with the software developers of our survey platform, to see if we can somehow define specific sets of criteria where an inbound call would not be able to access a deactivated record; however, I do not know whether this line of inquiry will yield the results we might hope for.

As far as systematically checking for some of these potentially confusing occurrences, I’m sure we can have a protocol in place to check on a recurring basis, whether on our end or yours; however, I think the more salient question is, what would the desired action be upon finding them? We certainly would not want to (nor am I even sure we could) delete call attempts from the database. If, however, what you are alluding to is wanting some data cleaning to occur on our end before providing you with the call history exports; then, I’m sure we can develop a protocol for that, but we might need to talk about the budget implications.