Embedding Critical Content in an E-mail Message Body
Patient satisfaction scores at Kaiser Permanente drive operational improvement efforts, process changes and directly impact physician level compensation. These operational and strategic imperatives drive the need for data quality and validation.

Data quality depends on review by operational stewards of the content. Volumes of complex data disappear as e-mail attachments. Monitoring, reviewing, and triaging critical data shifts are imperative -- and facilitated by embedding a summary image of the results in automated results reporting.

Objectives

- Improve data quality
- Facilitate review by operational stewards of the content
- Highlight critical data shifts
- Reduce downstream error rate
- Ensure accuracy of physician compensation measures
Embedding Critical Content in an E-mail Message

Method

Syntax: filename fileref email <address><email options>;

fileref – "output" references external file or device type; <= 8 characters
email – specifies that the external device type is email
to – recipient email address
replyto – specifies sender email address
options – (shown here) include subject, attach, reply to, to, content type (CT), output data set (ODS)

```
filename output email
subject= "(PHI) Encounters by Department for Period &startDate - &endDate (PHI)"
replyto= user_sender
to= &recipient_list
CT= "text/html";
ods msoffice2k body=Output style=styles.movFmt; /* required for html output */
ods escapechar=""; /* msoffice2k retains formatting in an email body */
option noquotelemax; /* specifies that SAS does not write a warning message to the SAS log about
the maximum length for strings in quotation marks */
ods escapechar=\"; /* prevents neutralizing long string errors in SAS log */
```

Two titles are permitted

The email body is comprised of the titles, footnotes and the contents of summary data set.
Results

- Embedding a summary image drives expert data review from 15% to 87%
- Critical data shifts are highlighted
- Downstream error rates are reduced
- Increased accuracy to physician compensation measures results

Former State:

Data consumption rate < 15%
Raw data transmitted in email attachments
Undesirable downstream error capture rate
Increased risk to data confidence

Summary analysis transmitted in email body
Downstream error rate significantly reduced
Increase accuracy to variable physician compensation measures

New State:

Data consumption rate > 90%
Summary analysis transmitted in email body
Downstream error rate significantly reduced
Increase accuracy to variable physician compensation measures

Automated header variables update critical data points:
- Data range
- Patients served
- Surveyable patient count
- Team patient load

Automated summary statistics populate email body