Checklist for Vaccine Shortage/Influenza Vaccine Management in Centralized Distribution System

Real time, accurate inventory information:
Background: Accuracy of data is critically important. Data that is inaccurate or does not reflect the most recent orders and shipments creates a burden as it must be checked and re-checked by grantees. Then, grantees must engage with McKesson and/or CDC to clear up the problem. Managing vaccine in limited supply requires knowledge of inventory in real time. This is extremely time-consuming and can result in loss of allocated doses if issues are not resolved before the end of the month.

Recommendations:
- Grantees should have complete documentation about how inventory is tracked and managed for McKesson shipped vaccines.
- Grantees should have clear and complete documentation about how inventory for vaccines that are subject to an allocation are managed (e.g., Hib, influenza vaccine).
- Grantees should have access to information defining the number of doses available in stock, the amount of monthly allocation used and remaining, doses shipped and doses ordered/remaining to be shipped. This information should be provided as close to real time as possible. Currently, grantees have to send an e-mail requesting this information.
- Accurate reports from McKesson and CDC should be provided as often as possible (daily, weekly, etc.). At a minimum, accurate monthly activity documentation should be provided at least once a month to support grantee management of their monthly allocations, and to have a full understanding of their overall vaccine supply. During influenza season, weekly reports will be critical.
- Grantees should receive clear documentation and guidance about monitoring their allocations, orders and shipments and tools to support this work so they can compile data to manage the status of their allocation and their vaccine use.

Replenishment and monitoring reports:
- CDC should conduct a quality improvement activity in reconciling data from the replenishment and monitoring reports with VACMAN and McKesson shipping data
to verify data accuracy. Currently, replenishment and usage data do not always match.

- It is critical that replenishment reports and monitoring reports be developed using the same data (i.e., both from ordering data).
- Spend plan worksheets, monitoring reports and replenishment reports should be in comparable formats with similar presentations. This would allow for comparison, cutting and pasting, and data transfer between documents to improve efficiency and management of vaccine.

**Monthly allocation defined by time of order, not time of shipment**

- Vaccine orders placed in February but shipped in March should be counted against the February allocation, not the March allocation.
- Orders should be defined by the date they are placed, not the date they are approved by CDC and/or transferred to McKesson. Again, this might take a few days and should not be lost from a monthly allocation if the process carries into the next month.

**Shipment of vaccine as quickly as possible**

- Vaccine that is available in stock should be shipped out immediately.
- If more than one brand choice has been ordered by a provider, brands that are available should be shipped immediately rather than waiting for all brands ordered. This is especially important for influenza vaccine.
- If a brand choice or presentation has been ordered by a provider but is not available, and another brand or presentation is available, the grantee should be notified and asked whether a substitution should be made. This should not require an order cancel or re-order.

**Centralized Vaccine Distribution General Recommendations**

- AIM requests that CDC dedicate more staff, time, and attention to VACMAN. Suggestions for trouble shooting:
  - Use a Q&A format, where grantees identify VACMAN issues, and CDC responds to the issue at hand, time-line for resolution of the problem.
  - Provide a written report of the solutions to VACMAN issues.
  - Conduct quarterly VACMAN calls for grantees to identify, discuss and resolve VACMAN related issues.
- AIM requests that a written users guide be developed for VOFA, spend plans, and related work books. Specifically, guidance is requested on when and how spend plans should be updated and when work books should be used, etc. Guidance should include: suggested methodologies for spend plan development, clear explanation of the implications of spend plans, importance of adjustments.
Quality Improvement for Vaccine Distribution and Shipment Monitoring:
Many grantees and providers are still experiencing inaccuracies in vaccine distribution. These inaccuracies are happening both with physical delivery of products (e.g., amount delivered does not match amount ordered or amount showing as shipped), and inaccuracies in the data from all sources (VACMAN, CDC replenishment and monitoring reports, McKesson shipping data, provider invoices). Grantees are tracking doses ordered and delivered and their information does not always match what is provided by McKesson. It is not known whether mistakes are occurring at McKesson or during the transfer of information from CDC (VACMAN) to McKesson. There are incidences where packing lists do not match McKesson shipping data or VACMAN shipping data, even when the VACMAN and McKesson shipping files match. VACMAN data and the McKesson shipment data do not always match.
- AIM strongly suggests that the CDC undertake a total quality improvement initiative regarding vaccine distribution (physical) and data quality related to vaccine distribution to address the challenges outlined in the paragraph above.

Timeliness of data receipt and vaccine shipments:
- AIM urges CDC to work with McKesson and internal staff to improve the accuracy and timeliness of vaccine distribution data. McKesson currently provides shipping data via an excel spreadsheet the morning after each shipping day however, it can take several days for the data to be updated in VACMAN. Information should be updated in VACMAN more quickly as well as provided to grantees so it can be entered into registries and information on orders can be made available to providers who request it.
- AIM recommends the McKesson contract be amended to create standard operating procedures for vaccine shipment to require quicker turnaround time between order and shipment. Vaccine orders should be filled and shipped as quickly as possible. The current contract allows for up to 5 shipping days, which can span time periods of up to two calendar weeks for standard vaccine delivery.

Written protocols and guidance for vaccine distribution errors:
- AIM recommends CDC create written standards of practice for identifying and resolving shipping errors and trouble shooting data issues.
- Documentation should include protocols regarding vaccine received with temperature monitors that are triggered, how over or under shipments should be managed by the grantee. The protocol should also clearly articulate the responsibilities of each party: CDC; McKesson; Grantee; Provider.
- Occurrence and management of partial shipments: In the absence of vaccine supply problems and not including influenza vaccine, partial shipments should not be sent to providers. Grantees are reporting that providers are receiving partial shipments for no
apparent reason. The partial shipments are causing provider confusion and complexities in the tracking and monitoring of orders and shipments. Order management to prevent duplicate shipments: When orders are cancelled, expedited, or created through an information system error, there is a risk that duplicate orders will be shipped to the provider. Is it possible to:

- Implement a quality improvement project at McKesson whereby manual processes are put in place to assure that duplicate orders do not ship.
- Implement an information system quality check that would identify duplicate orders for the same provider within a certain time frame, and (1) ship one order (2) require that the duplicate be verified by the grantee before shipping the second order.