Intersecting roles CMS and FDA – implications for pharmaceutical and device industries

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Traditional & intersecting roles

- CMS –
  - Traditional: pay for healthcare services
  - Reality:
    - Have to make decisions about what to pay for – based on evidence
    - Collects data on healthcare events by virtue of claims
    - Has ability of spurring creation of new knowledge, through coverage
- FDA –
  - Traditional: ensure safety of medical items prior to market
  - Reality:
    - Sets evidentiary standards
    - Ability to mandate post-market evidentiary development
    - Great interest in ‘post-market’ surveillance for adverse events

Examples of intersecting activities at CMS

- Coverage determinations
  - Greater clarity in recent years
  - Not redundant with FDA decisions
    - But not unrelated
  - Increasing work on coverage in the context of evidence development (CED)
  - Drawing more attention to representativeness issues in clinical trials
- Surveillance
  - Claims data for health outcomes assessment (not just cost calculations)
    - Wennberg studies – variations in costs without variations in outcomes
    - Patterns of care studies – underutilization of worthwhile therapy
    - Observaitonal data analyses – can estimate treatment effects
  - Moving forward to create or motivate ‘surveillance’ systems
    - Registries for particular conditions
    - Claims data, including drug claims for part D

Coverage – static decisions

- Evidentiary standards increasingly codified
  - Individual coverage determinations articulate reasoning
  - Guidance documents articulate principles
- Standards not the same as FDA
  - CMS sometimes non-covers drugs/devices despite labeling
  - But, CMS often covers non-labeled uses
- Mandate: pay for items or services that are "reasonable and necessary" for management
  - Evidence hierarchy – topped by RCT's

Coverage – dynamic decisions

- Coverage under evidence development
  - Service/Item covered in the context of further evidence gathering
    - Additional patient information gathered to assure appropriate use of item or service
      - Can drive longitudinal data collection
    - Specific investigation into impact of item or service on health being conducted as part of coverage (coverage only in a clinical trial)

Example of CED

- ICD (implantable cardiac defibrillator registry)
  - Registry required as part of coverage –
    - Assures appropriate patients get service
  - Longitudinal data on firing and mortality developed outside CMS
  - Should produce valuable evidence about effectiveness and complications.

Another example of CED

- **PET (positron emission tomography) scanning for cancer patients**
  - **Coverage supported for all eligible patients**
  - **Additional clinical data on patients required for coverage**
  - **Collected through registry that is also addressing relevant clinical questions**
    - **How does PET scan alter clinical mgmt**

Another example of CED

- **Coverage of oxygen therapy in NHLBI trial**
  - **Will definitively answer whether it benefits patients with obstructive lung disease**
  - **Can be used for future National Coverage Determination**

Reasons CED gets triggered

- Reasonable questions need to be answered in order to make coverage determinations
- Patients studied not representative of Medicare population
- Further baseline data needed to assure appropriateness
- All move CMS coverage process from static to one of evidence development and surveillance

Surveillance

- Through paying based on ‘fee-for-service’, CMS gathers longitudinal health records for every beneficiary
- Decades of research evaluating these claims histories have demonstrated that patterns of claims can be analyzed to determine
  - Patterns of care
  - Impact of services

2 major surveillance initiatives

- CED through registries – to establish monitoring systems (as for ICD's), prospective inception data developed with important clinical details beyond that available in claims
  - Can overlap with FDA mandated post-market activities
- Use of claims for drugs and services to monitor for adverse events
  - Fair amount of work looking at adverse events after major surgeries
  - Some work looking at adverse events in relation to physician administered drugs (part B drugs)
  - Next frontier is the Part D prescription drug system

Part D claims

- Surveillance systems should be large and comprehensive
  - 1M p-years accumulated in FFS Medicare every 9 days
  - 3M prescriptions filled daily
- Claims should capture impt events
  - Medicare pays for care of most serious medical events and complications

Opportunities

- Evaluate individuals on various Part D drugs for frequency of healthcare events occurring in claims
  - Adverse event surveillance
  - Comparative studies between agents
  - Assessment for rare but known side effects
- Evaluate adequacy of medications obtained by beneficiaries linked to diagnoses
  - E.g. look for diabetics on and off ACEI's
- Evaluate impact of therapies in rarely studied populations
  - Minorities, elderly

Cautions

- Adverse event monitoring will have to be conducted by analyzing millions of people on many millions of drugs experiencing many millions events
  - Therefore, many many analyses will be performed any many different parts and combinations of data
- Epidemiologically, a risk that multiple analyses lead to false positive results
- How to handle this?
  - Put systems in place to protect against false positives, like validation datasets

Conclusions

- CMS is doing a fair amount that is related to FDA's regulatory activity
  - Clarifying evidentiary requirements drives study design during development phase
  - Further enabling evidence development through CED enhances evidence base for particular uses and creates post-market surveillance resources
  - Linking claims for drugs (part b and d) to other Medicare claims creates an enormous resource for adverse event monitoring.