



# Byproduct Material Events Subcommittee Report

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# Background

- The subcommittee has reviewed the NMED database and tabulated the medical events
- The Subcommittee understands the desired aims of:
  - Identifying trends and causes
  - Coming up with solutions

## Subcommittee Findings:

- However this admirable goal is not possible with the raw data in NMED
- An obvious limitation is the absence of denominators

## Subcommittee Findings:

- So unless the denominators are available, trends can't be accurately identified
- Educated guesses can be made and estimates can be made based on data from 2006
- Accurate figures can be obtained

## Subcommittee Findings:

- Can NRC and the Agreement States obtain this data?
- Just ask the licensees provide the numbers
- Licensees will likely NOT provide these numbers unless required
- Is regulatory requirement the best use of resources?

## Subcommittee Findings:

- A possible trend in ME's involving radiopharmaceuticals: failure to verify the amount to be administered
- A suggestion: WD could include a checkbox

# Nuclear Medicine Byproduct Events

- Diagnostic: 2
- Therapeutic (35.300): 5 (down from 15 in 2008 and 7 in 2007)
- Shipment Reports: 13

35.600

- HDR Brachytherapy: 7 (vs 8 in FY 08): "Wrong location" = 3; "Wrong site" = 3; Low dose = 1
- Gamma Knife: 6 total (vs 1 in previous period)
- No Teletherapy, Intravascular or others (1 teletherapy in FY2008)

35.400

- 26 Events (27 patients)
- (Contrasts with 10 Events involving 114 patients between 10/1/07 – 9/30/08)
- Y-90 microspheres: 9
- Prostate: 17

# Conclusions

- Recommend further improvements to NMED
- Denominators are needed
- Without this, the value of this exercise is questionable

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# Acronyms

FY – Fiscal Year

HDR – High Dose Rate

ME – Medical Event

NMED – Nuclear Materials Events  
Database

NRC – Nuclear Regulatory Commission

WD – Written Directive

Y-90 – yttrium 90